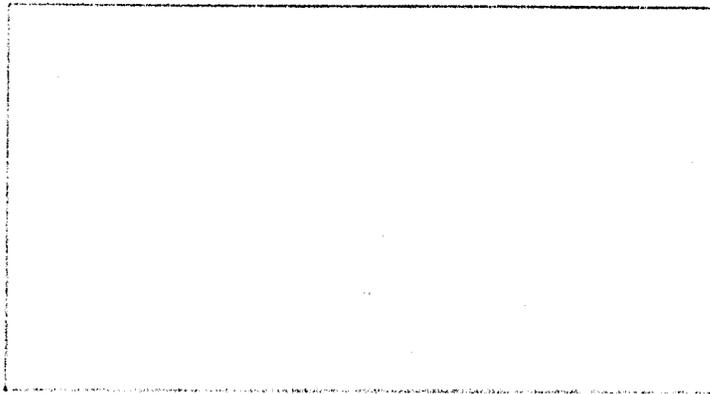


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The "Migrant Smallholders":

Tenant and Laborer Participation,
Remuneration, and Social Welfare
Within Malawi's Expanding Estate
Sub-sector

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The Social Analysis of Policy Change in East Africa Project

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Executive Summary

1. With a growing scarcity of land and fragmentation of individual landholdings within the customary smallholder sub-sector, and with very slow growth in incomes, employment, and productivity within this sub-sector, large numbers of smallholders have sought employment within Malawi's expanding estate sub-sector, either as tenant producers or as permanent or casual laborers.

2. While a few studies have been undertaken which have addressed aspects of the estate labor market, our understanding of the scale and distribution of estate employment as well as the remuneration and social welfare of those serving as tenants or estate laborers remains quite limited. How wide is smallholder participation in the estate labor force and how large is the tenant/laborer and dependant population actually resident on estates? Has estate employment and tenancy been a means of poverty alleviation for resource-poor smallholder farmers? Does estate employment at least provide individual workers and their families with more secure access to food and basic social amenities than presently available within the customary sub-sector? Prior research has provided only partial and conflicting answers to such questions. Further understanding of these issues is critical for evaluating the income-earning options available to smallholder farmers and the overall contribution of the estate sub-sector to rural development and the Malawian economy more generally.

3. Through a review of official statistics and prior research pertaining to the estate labor market, through further analysis of the data set from our 1990 multi-district survey of 119 estates, and through a series of case studies of estates and estate tenants and laborers in Kasungu and Lilongwe Districts, this exploratory study has tried to provide additional empirical evidence upon which to understand the operation of the estate labor market and upon which policy discussions regarding the estate and smallholder sub-sectors can be based. The study has also sought to identify critical elements of the estate labor system which should be monitored on a continuous basis as well as identify institutional changes and interventions which could improve the performance of this sub-sector, particularly with regard to the welfare of estate workers.

Composition, Size, and Distribution of the Estate Labor Force

4. The estate labor force is rather complex, combining several different types of workers whose economic and social ties with estate owners and managers also vary in their character. Among those included within the estate labor force are: 1) paid and unpaid family members of estate leaseholders and managers, 2) tenants and their unpaid family members, 3) permanent laborers

(hired for a period lasting from a few months to year-round), and 4) casual (ganyu) laborers (hired on a daily or weekly basis). The relative importance of these various types of workers differs across components of the estate sub-sector with tenants being the primary source of labor in both the burley tobacco and sugar industries and with the tea and flue-cured tobacco industries relying more significantly upon permanent laborers.

5. Relatively little information is available on the composition of the estate labor force in terms of gender and age. In our 1990 survey of primarily burley tobacco estates, we found that adult males constituted 70% of the permanent labor force and 42% of the casual labor force. Adult females were found to account for a very small proportion of permanent laborers (eg. 8%), yet formed a large share of casual laborers (eg. 35%). Children (eg. people less than 15 years of age) were found to account for 22% of both the permanent and casual labor forces. Amongst tenant households, all family members were found to be engaged in tobacco and/or food crop production with women and children joining the household head in performing all tasks other than tobacco barn construction.

6. Outside of smallholder agriculture, the estate sub-sector has been the largest source of employment opportunities in Malawi. While the rate of employment growth within the smallholder sub-sector is estimated to have been only 2.3% per annum over the 1978-1987 period, we estimate the number of permanent workers in the estate sub-sector (eg. including permanent laborers, tenants and tenant family members, and leaseholder family members) increased by an average of 8% during the 1980's, reaching a total of 369,700 in 1989. The bulk of the expansion in estate employment over the past decade has been accounted for by the greatly increased numbers of tenants within the burley tobacco industry.

7. Employment within the estate sub-sector appears to have kept pace with the dramatic expansion in the land area covered by estates which we analyzed previously in Beyond 'Dualism': The Changing Face of the Leasehold Subsector of Malawi. In both 1981 and 1989, the estimated number of permanent workers employed per hectare of (leasehold + freehold) estate land was 0.44, this figure being higher than an estimated employment rate within the customary smallholder sub-sector of 0.30. Caution is required in deriving policy implications from such results given that many of the "permanent" workers in the estate sub-sector are employed for much less than a full calendar year or crop season.

8. There exists only limited official data regarding the distribution of estate workers by region, district, and estate size category. Official statistics cover only the numbers of wage laborers working on agricultural enterprises in different districts. While there does exist a system (through the annual tobacco licensing system) to solicit and record information on the number of tenants hired by individual estates, we have found

this data collection system to be dysfunctional with the Ministry of Agriculture's data base on tenants and laborers in the tobacco industry to be of little use for analytical purposes.

9. Drawing upon official data on burley tobacco quotas by district and by estate size category and making assumptions about average tenant tobacco plantings (eg. 0.6 Ha.) and about average yields for different estate size categories, estimates were made of the total number of tenants per district for the 1989/90 season. This analysis indicated that of approximately 102,000 tenants for that season, over 75% were operating within the Central Region and some 50% were in three districts alone--Kasungu, Mchinji, and Lilongwe. Outside of the Central Region, significant numbers of tenants are employed only in Mzimba and Rumphi in the north and Mangochi and Machinga in the south.

10. Estimates were made of the tenant household populations per district and the proportion of total district populations accounted for by tenants and their family members. We estimate that the resident tenant population (eg. tenants and their dependents living on estates) was 586,000 in 1989, representing about 7% of Malawi's total population and 8.5% of its rural population. On a district basis, this resident tenant population is even more significant. For Kasungu District, we estimate that 48% of the entire population consists of tenants and tenant household members. For both Rumphi and Mchinji, we estimate that one-fourth or more of the total population is accounted for by tenant households. In five other districts--Nkhosakota, Ntchisi, Dowa, Salima, and Mzimba--the estimated resident tenant (and dependant) population also exceeds 10% of the total district population. From this analysis and from a review of the results of Malawi's 1987 Population Census, it appears that migration for tenancy on estates has had an appreciable impact on the distribution of population within the country and within particular regions and districts.

11. While permanent laborers frequently do not bring their family members with them to estates, some do, especially within the tea industry and where the length of work is extended and the employment is far from the laborers' home village. According to a recent study by Project Hope, up to 60% of the nearly 225,000 people associated with the tea industry in Thyolo (either as workers or dependents of such workers) are resident within tea estate compounds. Taking into account such people, together with estimates for the number of permanent laborers and dependents residing on other types of estates, we reach an estimated additional 400,000 people living on estates.

12. Thus, an estimated one million estate workers or dependants are resident on estates in Malawi. This has significant implications for access to and use of social services, for the monitoring of the health and food security situation in the country, and for child development, as it appears that a very large proportion of children of tenants and permanent laborers

(on tobacco estates) do not attend school. Estates, as private enterprises, have been traditionally regarded as operating beyond the reach or mandate of official social, health, and community services. However, given the large and growing resident population on estates, such 'invisible' people must be brought into the mainstream of the social service delivery systems.

13. An analysis of the distribution of estate laborers and tenants among estates of different size categories indicates that the large majority of such workers are employed (and resident) on medium-to-large-scale estates. An estimated 80% of permanent laborers (and dependants) are associated with large-scale estates. For tenants (and dependants), some 38% are employed on large-scale estates and another 28% on medium-scale estates. Only 1/3 of tenants are estimated to be associated with estates of less than 30 hectares even though such estates constitute the large majority of registered leaseholds. This distribution of estate workers and dependants provides an opportunity to improve the social welfare for large numbers of people over a relatively short time given that it is the larger estates which are better endowed with the financial and technical resources to invest in social amenities.

Socioeconomic Characteristics of Estate Tenants and Laborers

14. A comparison of our case study sample of 32 tenants and 32 laborers indicates that tenants tend, on average, to be considerably older, to be more generally married, to have larger household sizes, and to have more extensive landholdings and other assets (eg. livestock) at home. Little difference was discerned between the educational backgrounds of tenants and laborers.

15. An interesting finding is that tenant households tend to be considerably larger than the norm in Malawi. In our sample, the average household size for tenants was 5.72. This is not because tenants generally have more children than others, but because tenants frequently bring with them to estates members of their extended family. Hence, many of the younger tenants within our sample had living within their household brothers, cousins, and/or in-laws, in addition to their spouse and children. Some of the older tenants had nieces, nephews, and even grandchildren living with them on the estate. A few tenants within our sample had hired laborers living within their households on the estate.

16. In our sample of tenants and laborers on estates in Kasungu, we found that only a small minority (eg. 15%) originate from within the District. Most of the sampled workers have migrated from other districts within the Central Region, particularly Lilongwe and Dowa. While 79% of our sample of tenants and laborers originate from places within the Central Region, 13% originate from districts in the Southern Region. The remaining 8%

are refugees from Mozambique, this being a significant proportion considering that the research areas are very far from any border with Mozambique. Prior research has shown that for estates in the Northern Region, the majority of tenants and laborers have originated from densely populated districts in the Southern Region. Long distance migration for employment on estates thus appears to be the norm.

17. While it is frequently assumed that those attracted to estate employment are (near)landless, results from our case study research indicate that this is not necessarily true. Among our sample of tenants, 25% do report having less than 0.5 hectares of land, although another 41% report having more than 2.0 hectares. For at least half the tenant sample, landholdings at home are equal to or greater than the land provided to them on estates. Among our sample of laborers, landholdings at home vary considerably, although most of the younger laborers report having little or no land of their own. Forty-two percent of our sample of permanent laborers report having less than 0.5 hectares of land outside of the estate.

18. A significant proportion of both tenants and laborers in our sample have invested in some form of livestock, particularly goats and chickens. While most of this livestock is held at the workers' home villages, more than one-half of the sampled tenants report that they raise chickens on the estate. In several cases, these holdings were not insignificant, numbering more than ten animals.

19. Results from our case study research (and previous research) indicate that the vast majority of tenants and permanent laborers did not have experience growing tobacco prior to their initial entry into the estate labor system. Prior to entering the estate labor system, the sampled workers were either attending school, growing maize and other food crops at home, or working in off-farm jobs. One-fourth of our sample of tenants entered the estate sub-sector initially as permanent laborers, presumably to gain experience in tobacco cultivation practices prior to growing the crop themselves as tenants. Some of the more established estates require or prefer that their newly-recruited tenants have prior experience with tobacco.

20. Most of our sample of permanent laborers are relatively new entrants into the estate labor market. Only three of the twenty-nine permanent laborers interviewed have worked in their current employment area for five years or more. In contrast, among our sample of tenants, the average number of years in which they have been tenants is 4.4 and more than half of our sample have been tenants for five years or more. While quite a few tenants have remained within the system for an extended period, there appears to be a high degree of tenant turnover on individual estates. From our 1990 survey, we found an average tenant turnover rate of 31%, the rate being 40% on estates of 30 hectares and less.

Labor Recruitment and Terms of Tenancy and Employment

21. The majority (eg. 59 %) of our sampled tenants and permanent laborers obtained their current position by migrating to the estate area and applying for work. Nineteen percent of workers were recruited via a relative or friend already working on the estate. Most of the remaining tenants and laborers were 'recruited' from home, meaning that the estate owner or manager picked them up in his lorry and transported them to the estate just prior to the production season. Nearly all of the sampled workers who report being (near)landless migrated in search of work.

22. While written contracts between estate owners and tenants were once common and standardized throughout the tobacco industry, written contracts are now exceedingly rare, existing only for a few large estate companies. Most tenancy agreements are oral, with wide variations in the range of pre-specified terms and the content of such terms. In some cases, important issues are initially left vague or ambiguous. This is most common with respect to the food rations and social amenities to be supplied to workers.

23. A serious problem associated with many tenancy agreements is the lack of clear (prior) specification of the unit costs to be charged for production and consumption credit items, of the grades of tobacco to be used, and of the prices to be paid for different grades of tobacco. The vast majority of tenants within our sample did not know what they would be charged for production inputs and food rations and some of those who inquired about such costs were told by the estate owner that "it was none of their business". This lack of transparency in tenancy terms creates uncertainty and misconceptions, and leads many tenants to feel that they are being cheated of their legitimate earnings. Preliminary analysis of estate costings for inputs and food rations indicates that in many cases high rates of interest or other costs are indeed charged to tenants. Some estates attempt to transfer parts of their overhead costs onto the accounts of tenants, although this is generally not made explicit. Many different systems for tobacco grading and pricing are operative, having different degrees of fairness for the tenant.

24. Our case study and prior research indicate that there are serious and fairly widespread problems within the sub-sector regard housing, water, and sanitary conditions for tenants and laborers. While there are some exceptions amongst larger estates, housing conditions are generally poor with the norm being grass/reed huts of 10-12 square meters, with no or only communal latrines. While the estate covenant requires that there be a source of clean water on the estate, we found in our 1990 survey and in the present case study research that this requirement is not always met. Only a small proportion of small-to-medium-scale estates have either a functional water tap or bore hole.

25. Estate and laborer case studies suggest that many of the "permanent" laborers employed on burley tobacco estates have regular work on an individual estate for only three to five months a year. This short periodicity of work appears to be especially common for women, most of whose work on these estates is undertaken over the March - May period. Prior research has shown that the employment of women in the tea industry is also generally limited to a few months per year. The entire notion of "permanent" laborers on tobacco estates requires re-assessment.

Tenant and Laborer Remuneration and Food Security

26. The evidence from our case studies, our 1990 survey, and prior research indicates that on average, tenants earn considerably higher incomes than is the norm within the customary smallholder sub-sector. In our 1990 survey, the average reported tenant profits for 90 estates was K 621 for the 1988/89 season, while among our sampled case study tenants the average profit was K 695 for the 1989/90 season. To these figures should be added the value of food rations received, this being in the range of K 150 to K 240 per season. This total average tenant income of K 800 per household is about double the estimated average household income within the customary smallholder sub-sector.

27. An analysis of trends in average tenant incomes over time was undertaken using both case study and national level data. The analysis indicates that while average nominal incomes increased substantially during the 1980's, tenant incomes in real terms have been stagnant through the boom years of the burley tobacco industry. In real terms, (average) tenant incomes appear to have been no higher in 1989 than in 1981.

28. Nevertheless, a comparison of such trends in real tenant incomes with long-term trends in real agricultural wages and the profitability of smallholder agriculture (eg. maize and groundnut production/sale) indicate that trends in tenant incomes have been considerably better than for wage laborers and smallholders within the customary sub-sector. That is, the opportunity cost of being a tenant declined significantly over the past decade.

29. While tenants on average appear to have higher incomes and have had more favorable trends in their real incomes, the available evidence suggests that there is a wide dispersion of incomes amongst tenants, with large differences between estates and among tenants on individual estates. Results from our case studies, our 1990 survey, and prior research suggest a segmentation of the tenant population in which: 1) about one-fifth of tenants earn relatively high incomes (eg. K 1000 +) from tenancy, enabling them to invest in land, livestock, and/or off-farm businesses, 2) about one-half of tenants earn moderate levels of income (K 300-600), which while insufficient for investment purposes, gives them to capacity to better meet their

basic consumption needs than can many smallholders operating in the customary sub-sector, and 3) about 25-30% of tenants who appear to be earning little or no cash income from tenancy and whose living standards could well be lower than the norm within the smallholder customary sub-sector.

30. A preliminary analysis was undertaken examining a series of estate- and tenant-specific factors expected to influence tenant incomes, either positively or negatively. The results suggest that tenants on the very small estates (eg. less than 15 hectares) earn, on average, incomes which are considerably below those achieved by tenants on medium-to-large-scale estates. Our data indicate that tenants operating on estates practicing monocropping earn, on average, incomes well below tenants on estates which practice crop rotation. Other estate-specific factors found to be positively associated with average tenant incomes were the educational level of managers and the amount of production/consumption credit supplied, the latter probably a proxy for greater fertilizer distribution to tenants.

31. Of the tenant-specific factors investigated, those having a significant positive association with tenant incomes were the number of adults within the household, the number of years in which the tenant has been a tenant, and the value of production/consumption credit received. Among our sampled case study tenants, those who previously held positions as permanent laborers on estates had considerably higher average incomes than the remainder of the sample. Our analysis of the estate- and tenant-related factors affecting tenant incomes is quite preliminary and additional research is needed in this area.

32. The majority of tenants included within our sample have income sources other than tobacco production, although such incomes were generally not quantitatively significant. In only three of thirty-two cases did such incomes amount to more than K 100. While the most common additional source of income was performing ganyu work on or off the estate, the most lucrative additional income sources were construction work, selling crops and processed foods, selling chickens and eggs, and selling distilled beer.

33. In real terms, agricultural wages on private agricultural farms declined sharply during the 1980's. While the official rural minimum wage was increased sharply (from 0.77 to K 1.74/day) in 1989, results from our 1990 survey and the present case study research indicate that it is only among large-scale estates that this minimum wage is commonly paid to adult male laborers. Even taking into account the value of food rations, the majority of adult male laborers employed on the small-to-medium-scale estates within our survey were paid below the official minimum wage. Wage rates or in-kind payments to women and children are generally much lower than those for adult males.

34. The most important source of food for both tenants and permanent laborers is food rations provided by the estate owners or managers. Food rations normally consist only of maize or maize flour, with supplies of groundnuts, vegetables, or other foods generally rare. On many estates, the size of the food rations for tenants does not vary with household size--both a three-member tenant household and a seven-member tenant household are provided with one bag of maize per month. The length of time in which rations are provided varies between estates from only four months a year to year-round. The norm is for eight months from August to March.

35. For many tenants, own production of food is an important supplementary source. Different estates have different policies with regard to the allocation of land to tenants for own food crop production. Some estates do not allocate land for this purpose, either because of limited land areas, the belief that tenants will allocate too much of their labor time to food crops, and/or a calculated strategy to earn additional estate income through their food ration distribution system. In our 1990 sample, 31% of estates which have tenants did not provide land for tenant food production and a further 17% allocated less than 0.25 Ha. per tenant for this purpose. In general, estate owners do not provide tenants with fertilizer for their maize crops. Without fertilizer and with only very small plantings, tenant production of maize on the estates is normally sufficient to meet household requirements for only a few months. Both to diversify their diets and to scatter the time periods in which different food crops reach maturity, many tenants supplement their maize plantings by small plantings of sweet potatoes, pumpkins, and other vegetables. These are especially important in March just prior to the maturation of maize.

36. In the course of our investigation, we found food security to be a serious problem, especially among tenant households. Desperation during the 'hunger months' for some tenants led them this year to send out family members to do ganyu on other estates and to consume maize bran, a commodity normally reserved for chicken feed. It is not entirely clear whether the problematic food security situation observed can be attributed largely to the lower-than-average maize harvest last year or is a more continuous and widespread problem within the estate sub-sector. Our impression is that food insecurity is most common and severe on smaller estates given their more limited land, their more common financial problems, and their general lack of vehicles to procure maize from distant market outlets. Partial evidence for this is provided by data recorded at the Kasungu District Hospital over the April 2-11, 1991 period. Of the 104 children coming to the hospital from small estates, 71% were found to be stunted, having below normal weights for their age. This compares with a 50% incidence of stunting amongst children originating from places other than estates.

37. The results of the present study reinforce one of the major conclusions of our earlier study Beyond 'Dualism'-- "while most prior attention and policy discussion has focused on the issue of land utilization on estates, the results of this study suggest that issues concerning the use of human resources (including work conditions and remuneration, the participation of children and women in the labor force, the terms of tenancy, the training of managers) are at least as important in understanding the development potential of, and the problems faced by the estate sub-sector" (P. XV). If the estate sub-sector is to continue to serve as a major engine of growth in the Malawian economy, then the further development of this sub-sector should be governed by 'development with a human face', rather than a more narrow orientation to expanding crop production and sales.

38. The study concludes with a series of recommendations to the Government of Malawi and to USAID and other donor agencies as well as an extended agenda for further research.

Introduction

Over the past decade, agricultural production, incomes, and employment in Malawi's smallholder sub-sector have advanced at very slow rates, barely keeping pace with population growth within the sub-sector. According to Sahn et al. (1990), the number of people employed in smallholder agriculture increased at a rate of only 2.3% per annum between 1978 and 1987, while Malawi's total labor force expanded at a rate of 3.3% per annum. Real incomes for those employed in smallholder agriculture increased by less than 1% per annum over this period. With a growing scarcity of land within the smallholder customary sub-sector, and with little access to remunerative commodity market outlets, the income-earning opportunities for many smallholders remain quite limited.

In the face of such conditions and patterns, increasing numbers of smallholders have sought wage and other employment outside of the customary sub-sector. During the 1980's, rural to rural migration for employment in the estate sub-sector emerged as a major dimension of Malawi's changing labor market, with large numbers of smallholders becoming either tenant farmers, permanent wage laborers, or casual/day laborers on estates. This migration for estate employment has been especially important for people originating from the more densely populated areas of the country (especially in the Southern Region) and within the country's "estate heartland"- the Central Region.

Unfortunately, little is known about the structure of the estate labor force, about those individuals who participate in it, and about their remuneration and social welfare. For example, how wide is participation in the estate labor force and what are the barriers, if any, to entry into estate employment? How large is the labor force which is actually resident on estates? Has estate employment and tenancy been a means of poverty alleviation for smallholder farmers constrained by inadequate land, technical, and financial resources within the customary sub-sector? Does estate employment and tenancy provide experience and incomes to enable formerly resource-poor households to invest in agricultural and non-farm enterprises? Does estate employment at least provide individual workers and their families with more secure access to food and basic social amenities than presently available within the customary sub-sector? The answers to such questions are critical for evaluating the income-earning options available to smallholder farmers and the overall contribution of the estate sub-sector to rural development and the Malawian economy more generally.

Only partial and somewhat conflicting answers to such questions have been provided in a series of recent research reports and consultancy studies dealing with estate employment and tenancy, including those by Vaughan and Chipande (1986), Nankumba (1985, 1988, 1990), Nyanda (1989), Nyanda and Shively (1989),

Agmmark (1989), Mtawali (1989), and Duncan (1990). In addition, much of this work has involved either very limited (and biased) samples, problems in survey implementation, or over reliance on model or proxy figures instead of actual data. In our 1990 national representative sample survey of 119 estates, modules related to estate employment and tenancy were included, yet micro-level tenant and laborer household issues were little addressed in our report, Beyond Dualism: The Changing Face of the Leasehold Estate Subsector of Malawi. Instead, that report focused upon the macro-level growth and changing structure of the estate sub-sector and upon issues related to estate management, land use, and crop production.

This present exploratory study was designed as a follow-up or continuation of our previous research, geared toward:

a) contributing to the body of empirical knowledge regarding the estate sub-sector, particularly its labor force b) providing a further basis for discussions between the Government of Malawi and USAID regarding the focus and content of USAID's Agricultural Sector Assistance Program, and c) serving as a pilot effort for more comprehensive assessments of the estate sub-sector and of Malawi's rural labor market.

In designing and implementing this research, our primary objectives have been:

- 1) to gain insight into the composition, size, and distribution of the estate labor force (including laborers and tenants),
- 2) to better understand the socioeconomic characteristics of estate laborers and tenants,
- 3) to better understand the nature of estate management - tenant/laborer relations,
- 4) to examine further issues related to the remuneration and social welfare of estate laborers and tenants,
- 5) to identify critical aspects of the estate labor market which should be monitored on a continuous basis, and
- 6) to identify institutional changes and interventions which will improve the overall performance of the estate sub-sector.

Study Methodology

Several different methods were used to obtain data and qualitative information pertaining to the above issues. Firstly, the existing literature on and official statistics related to estate employment and tenancy in Malawi was carefully reviewed. Secondly, further analysis was made of the data set for our 1990 national representative probability sample of 119 estates, covering five districts and stratified by estate size categories.

This data covered the employment levels, rates of remuneration, and production support and social amenities provided to tenants and laborers on the sampled estates. Thirdly, a series of case studies were done on estates in Lilongwe District, involving detailed analysis of estate records and files pertaining to tenant and laborer employment and remuneration. The estates were purposively selected to represent 'high-yielding' and 'average-yielding' estates.

Fourthly, case studies of a small sample of tenants and laborers on eight estates in one District were undertaken in order to examine in detail the nature of tenancy and employment relations and conditions. Kasungu District was chosen from among the five districts covered in our 1990 survey, because of the high concentration of estates within this District (eg. approximately 9500 estates out of a national total of 14,500 - 15,000). Eight estates were selected from the twenty-four previously surveyed within the District (in 1990), two estates each from the following size categories:

- Up to 15 hectares
- 15.01 to 30 hectares
- 30.01 to 100 hectares
- More than 100 hectares

Accessibility of the estates was an important consideration given the short amount of time available for fieldwork (eg. two weeks). The sample was thus not a random sample. In addition to size categories and accessibility, consideration was also given to the number of tenants and permanent laborers on the estates when making selections. Five of the selected estates were in the southern part of the District near Sante and three were in the northern part near Wimbe.

Four tenants and four laborers on each estate were interviewed by a separate enumerator who lived on or near each of the estates for a one-week period. After developing a sampling frame of the tenants and laborers on each estate, subjects were chosen by the enumerators. Tenants who had worked as a tenant the previous year on some estate, not necessarily the present estate, were chosen over those who had just entered the tenant stream. A total of 32 tenants and 32 laborers (including 29 permanent (wanchito) laborers and 3 casual/day (waganyu) laborers) were interviewed using a structured questionnaire in Chichewa. Separate instruments were used for surveying tenants and laborers, each focusing on the socioeconomic characteristics of the workers, work history, employment arrangements, and indicators of social welfare. An interview guide was also utilized for collecting more in-depth qualitative information from at least one tenant household and one laborer on each estate.

Following pre-tests conducted near Bunda College and within Kasungu District, actual field work started on March 11 and was completed on March 23. Data processing was done with SPSS in

Kasungu and at Bunda College utilizing an electronic data entry format resembling the Chichewa questionnaire forms. Data entry and verification were completed on March 30 with the production of this report of preliminary findings being completed over the subsequent two weeks.

Outline of This Report

This report, in addition to the Executive Summary and this Introduction, consists of five main sections. Section A draws upon official statistics, secondary sources, and results from our 1990 survey to examine the overall composition, size, and distribution of the estate labor force in Malawi. The section highlights the considerable and growing importance of estate employment and the estate resident population.

Section B draws upon the present case study field research and prior studies to examine and compare the socioeconomic characteristics of estate laborers and tenants. Section C draws upon the present case study field research and data from our 1990 survey to examine patterns of tenant/laborer recruitment, the nature of tenancy relations, and the terms of employment for laborers. Section D draws upon a variety of sources to examine issues related to the remuneration of estate laborers and tenants and the food security situation on estates. Section E provides our main conclusions and recommendations.

A. Composition, Size, and Distribution of the Estate Labor Force

The estate labor force consists of several different types of workers, including:

1) paid and unpaid family members of estate leaseholders and managers, employed in multifaceted supervisory and production tasks,

2) tenants and their (unpaid) family members, employed to produce burley tobacco on a plot allocated by the leaseholder or manager. On many of the smaller burley tobacco-producing estates, some or all tenants are actually relatives of the estate leaseholder or manager. In some cases, tenant households extend beyond the nuclear family to include the siblings, cousins, in-laws, and even grandchildren of the household head,

3) permanent laborers, hired for a period lasting from a few months to year-round. These are employed for multipurpose duties including direct crop production (eg. flue-cured tobacco), crop or laborer supervision, assistance to tenants, infrastructure construction and maintenance, crop grading and preparation for sale etc., and

4) casual or 'ganyu' laborers hired on a daily or weekly basis to perform specific tasks during peak labor demand periods. Some 'ganyu' workers come from villages surrounding estates, while others may migrate considerable distances and work for periods of up to several weeks.

The relative importance of these different types of workers differs across components of the estate sub-sector. In the largest industry, that for burley tobacco, it is tenants (and their family members) which provide the largest labor input, accounting for some 50-60% of the labor required to produce the crop and prepare it for sale. Both permanent labor and seasonal, peak period casual labor is needed to supplement the tenant labor input. The relative importance of permanent and casual laborers varies with the size and overall nature of burley-producing estates. Among the relatively small burley estates (eg. less than 30 hectares), family members of the leaseholder and/or manager typically play an important role in the labor force.

In contrast, within both the tea and flue-cured tobacco industries, the bulk of the labor is undertaken by permanent workers, supplemented during peak periods (eg. weeding, reaping/picking, and grading) by casual workers. Such is also the pattern in estate production of coffee and tree nuts. The sugar industry is based on a combination of tenant 'contract farmers' and large numbers of waged semi-permanent workers.

Relatively little information is available on the composition of the estate labor force, in terms of gender and age. Regarding

permanent and casual laborers on burley tobacco estates, our 1990 survey of estates found that adult males constitute the largest proportion of both permanent and casual laborers, accounting for 70% of permanent laborers and 41.8% of casual laborers on these estates. Adult females were found to account for a very small proportion of permanent laborers (eg. 7.6%), yet were heavily represented amongst casual laborers (eg. 35.3%). The analysis found children (eg. less than 15 years of age) to be widely participating in the burley estate labor force. Children comprised more than 22% of both the permanent and casual work forces for the sampled estates, their participation being especially important during the post-harvest period. Amongst tenant households, all family members were found to be engaged in tobacco and/or food crop production with women and children joining the household head in performing all tasks other than barn construction. In Section B below, the present case study and previous findings regarding the socio-economic characteristics of permanent laborers and tenants on burley estates will be discussed.

For tea and flue-cured tobacco estates, Vaughan and Chipande (1986) found that most of the tasks were reserved for men, with women being relegated to highly seasonal and laborious activities such as weeding, reaping, plucking, and tying tobacco. A more recent household survey on tea estates (Project Hope (1991) found that 85% of the estate workers were males. In contrast to the patterns found in the tobacco industry, the employment of children appears to be quite limited in the tea industry. The Project Hope survey found only 6.7% of estate workers to be less than 20 years of age.

The Size and Expansion of the Estate Labor Force

Outside of smallholder agriculture, the estate sub-sector is the largest source of employment in Malawi, providing regular employment for some 10-12% of the labor force in recent years. Since the late 1970's, the rate of growth in estate employment has far outpaced employment growth within the smallholder sub-sector. While employment in the smallholder sub-sector increased by an average of 2.3% per annum over the 1978 -1987 period, we estimate that the rate of growth in the employment of permanent workers (including tenants) within the estate sub-sector averaged some 8% per annum over the 1977 -1989 period.

Table 1 traces the expansion in estate employment since the late 1970's and provides a breakdown of such employment according to crop or type. The data include only permanent workers as no estimates on employment of casual workers in the sub-sector are available. The table includes employment only at the farm level, but additional employment for tens of thousands of people is provided in the transport, processing, and marketing of tobacco, tea, coffee, sugar, and other estate crops.

Table 1: Permanent Employment in the Estate Sub-sector
(000s of Workers; Farm-Level Only)

Year	Tobacco Estates Permanent Laborers	Tenants + Family*	Tea Estates	Other Estates	Total**
1977	71.7	28.9	37.9	21.5	161.7
1978	87.5	29.8	37.6	21.8	178.1
1979	99.0	40.5	39.4	23.1	201.9
1980	97.2	47.2	38.1	22.7	205.2
1981	52.9	50.0	36.6	22.0	158.5
1982	72.9	61.3	37.0	21.7	218.5
1983	85.3	117.1	37.6	23.3	243.6
1984	80.6	61.0	39.1	25.0	218.6
1985	89.7	67.9	42.8	28.7	241.8
1989***	91.0	168.9	42.0	30.0	331.9

*Calculated by taking the number of registered tenants and multiplying by 2.5, assuming that the tenant's spouse is fully employed and that in half of tenant households an additional adult is employed full-time on the tenant plot. This may be an underestimation as the current survey found an average of 2.9 adults per tenant household engaged in tobacco production. This calculation also does not include the role played by children in burley tobacco production by tenants, although this is frequently quite substantial.

** Ideally, one would also want to include the family members of leaseholders and managers. At least on the smaller estates, these are important components of the labor force. Time series data on this are not available. For 1989, we estimate that such workers number an additional 37,800 up from less than 4000 at the beginning of the decade.

*** Data for tea and 'other' estates for this year are estimates.

(Sources: Primary Data from NSO, Reported Employment and Earnings Annual Reports; Tobacco Control Commission; Tea Association)

The table highlights the changing composition of estate employment. In the late 1970's, permanent workers on tobacco and tea estates accounted for the largest shares of estate employees. However, with the very slow growth (or decline) in national plantings and production in flue-cured tobacco and tea, the number of permanent workers on such estates has been virtually stagnant. The number of permanent workers on 'other' estates (eg. coffee, sugar, and tree nut) was stagnant during the early-to-mid-1980's, but has experienced some growth in recent years. Nevertheless, virtually the entire expansion in estate employment since the late 1970's can be attributed to the expansion of the burley tobacco industry and the greatly increased demand for tenants (and tenant family members) upon which this industry is

dependent. As a result, by 1989, more than one-half of all permanent estate workers were not wage employees, but were remunerated on the basis of their own crop production as tenants.

In Beyond 'Dualism', we documented the major expansion in the land area covered by estates during the 1980's. Still, as Table 2 indicates, employment within the sub-sector appears to have kept pace with this expansion in land area. The rate of employment per hectare within the estate sub-sector, estimated at 0.44 workers per hectare, may be higher than the employment-intensity of smallholder agriculture, which is estimated at only 0.30 workers per hectare. Some caution is required, however, in making such an assessment. As will be discussed further in Section C, many so-called "permanent" workers within the estate sub-sector are employed on a regular or full-time basis for only a few months per year.

Table 2: Employment Intensity of the Estate Sub-sector
(Permanent Workers Only)

	Total Number of Permanent Workers*	Total Estate Area (Ha.)**	Permanent Workers/Ha.
1981	165,300	372,100	0.444
1989	369,700	847,400	0.436***

* Includes (from Table 1) permanent laborers, tenants and family members, and leaseholder family members, the latter estimated at 3800 in 1981 and 37,800 in 1989.

** From Beyond 'Dualism', various Tables.

*** For comparison, Sahn, Arulpragasam, and Merid (1990, Table 3) indicate that the smallholder labor force in 1987 was 2,138,600. In Beyond 'Dualism' (Tables 1.1 and 1.2), we estimated that the customary smallholder area in 1987 was 7,173,900 hectares. This suggests an employment rate of 0.30 workers per hectare of land.

Distribution of the Estate Labor Force

What is the regional distribution of the estate labor force? Given the paucity of available data, it is possible to provide only a rough indication of the distribution of estate workers across regions, districts, and types of estates. Table 3 below provides official data on the number of "paid employees" in private agricultural, forestry, and fishing enterprises per district for 1986. The vast majority of such workers are permanent wage laborers on estates. The magnitude of such employment has not changed dramatically since 1986, so the table provides a rough indication of the current distribution of permanent laborers on estates.

Table 3: Distribution of "Paid Employees" in Private Agricultural Enterprises (Mostly Estates) (1986)

Region/District	Number of Employees	Share of Total (%)
Northern Region	14,543	9.0
Chitipa	73	-
Karonga	16	-
Nkhata Bay	5,693	3.5
Rumphi	2,926	1.8
Mzimba	5,835	3.6
Central Region	50,034	30.8
Kasungu	19,821	12.2
Nkhota-Kota	5,281	3.3
Ntchisi	71	-
Dowa	737	0.5
Salima	1,573	1.0
Lilongwe	8,211	5.1
Mchinji	11,302	7.0
Dedze	1,183	0.7
Ntcheu	1,847	1.1
Southern Region	97,735	60.2
Mangochi	19,786	12.2
Machinga	7,507	4.6
Zomba	5,287	3.3
Chiradzulu	1,378	0.8
Blantyre	6,869	4.2
Mwanza	1,077	0.7
Thyolo	34,407	21.2
Mulanje	16,093	9.9
Chikwawa	5,320	3.3
Nsanje	10	-
Malawi	162,312	100.0

(Source: Employment and Earnings Annual Report 1984-86, National Statistical Office (1988), Table 11c)

The data suggest that about 60% of the permanent laborers on estates are employed within the Southern Region, 31% within the Central Region, and 9% in the Northern Region. Such employment is heavily concentrated in only a few districts, with Thyolo, Kasungu, Mangochi, Mulanje, and Mchinji Districts accounting for nearly two-thirds of this employment. While the tea estates provide most of the employment in Thyolo and Mulanje Districts, it is burley and flue-cured tobacco estates which provide most of the employment opportunities in the other three leading employment districts.

Assessing the regional distribution of tenants is inhibited by

the absence of official data on the subject. While the number of tenants each estate expects to employ is supposed to be written on their tobacco license application and subsequently entered into the Ministry of Agriculture's computer file on tobacco-related statistics, it was found that this data reporting and maintenance system is dysfunctional. Most tobacco license applications submitted either do not indicate the number of tenants to be employed or indicate some 'magic' number, based on dividing their applied quota level by 1500 kgs. As a result, the Ministry's data on tenant numbers consists largely of zeros or fictitious numbers.

In the absence of direct data on tenant numbers by region or district, estimates were made based on the burley tobacco quota allotted to each region, district, and estate size category for 1989/90. To derive an estimate of the number of tenants from this data on burley quotas, it was assumed that each tenant grows 0.6 hectares of tobacco and that the marketed yields were the following: 900 kgs./ha. for estates less than 30 hectares, 1000 kgs./ha. for estates of sizes 30.01 to 100 hectares, and 1250 kgs./ha. for estates of 100.01+ hectares. Such modal yield figures were derived from the results of MJB (1990) and the estate models developed by Agmark (1989), Duncan (1990), and Fitch (1991).

Table 4 below provides the results of this analysis. The table indicates the number of tenants per region and district, the total estimated tenant population (including spouses, other adults, and children), the total population per district (as recorded in the 1987 Census), and the estimated share of this population accounted for by tenants and their family members.

The table indicates that for the 1989/90 season, there were nearly 102,000 tenants operating on burley tobacco estates. Three-fourths of such tenants are employed on estates within the Central Region, with only three districts--Kasungu, Mchinji, and Lilongwe--accounting for more than one-half of the total number of tenants nation-wide. Outside of the Central Region, large numbers of tenants are employed only in Rumphi and Mzimba Districts in the north, and Mangochi and Machinga Districts in the south.

The estimated resident tenant population for the 1989/90 season is some 586,000, representing 7.3% of the country's total population and 8.3% of its rural population (eg. 7,104,520). On a district basis, the significance of the tenant population is shown to be even greater. In the case of Kasungu, it is estimated that nearly one-half of the District's population consists of tenants and tenant family members. In two other Districts--Rumphi and Mchinji--the tenant population constitutes one-fourth or more of the entire population. In five other Districts--Mzimba, Nkotakota, Ntchisi, Dowa, and Salima--tenants and their family members are estimated as constituting more than 10% of the total population.

Table 4: Distribution of Tenants by Region and District
(Estimated for 1989/90 Season)

Location	Number of Tenants	Tenant Population*	Total Population (1987) (000s)	Tenant Pop. As % of Total Pop.
Malawi	101,964	586,293	7982.6	7.3
Northern Region	13,405	77,079	907.1	8.5
Chitipa	512	2,944	96.8	3.0
Karonga	38	219	147.1	0.1
Nkhata Bay	27	155	136.0	0.1
Rumphi	4,004	23,023	94.7	24.3
Mzimba	8,824	50,737	432.4	11.7
Central Region	76,932	442,359	3116.0	14.2
Kasungu	27,087	155,750	322.9	48.2
Nkotakota	4,178	24,024	157.1	15.3
Ntchisi	2,199	12,644	120.7	10.5
Dowa	9,206	52,935	322.1	16.4
Salima	6,083	34,977	188.3	18.6
Lilongwe	13,156	75,647	986.4	7.7
Mchinji	13,776	79,212	248.2	31.9
Dedza	473	2,720	410.8	0.7
Ntcheu	774	4,451	359.6	1.2
Southern Region	11,627	66,855	3939.4	1.7
Mangochi	5,029	28,917	495.9	5.8
Machinga	4,505	25,904	514.6	5.0
Zomba	1,201	6,906	438.2	1.6
Chiradzulu	126	725	210.7	0.3
Blantyre	283	1,627	587.9	0.3
Mwanza	263	1,512	121.3	1.2
Thyolo	18	104	431.5	0.1
Mulanje	202	1,162	638.3	0.2
Chikwawa	0	0	319.8	0.0
Nsanje	0	0	201.3	0.0

* Based on 5.75 persons per tenant household. For our sample of 32 tenants, the average household size was 5.72. Both Nyanda (1989) and Nankumba (1988) found tenant household sizes to average between 5.5 and 6.0.

(Sources: Primary data on tobacco quotas and district-level population from the Ministry of Agriculture Computer Files and the Malawi Population and Household Census (1987))

While permanent laborers frequently do not bring their family members with them to reside on the estate, some do, especially in the tea industry and where the length of work is extended and the employment is far from the laborers home village. According to Project Hope (1991), up to 60% of the nearly 225,000 people

associated with the tea industry in Thyolo (either as workers or dependents of such workers) are resident within tea estate compounds. Taking into account such people, the permanent laborers (and some family members) on other types of estates (estimated at 242,000), the family members of leaseholders (estimated at 37,800), and tenants and their family members, we would estimate that the total worker and dependent population resident on Malawi's estates reaches one million people, representing 12.5% of the total national population.

Such a large resident population of workers and dependants on estates has major implications for the use of social services in particular districts, for monitoring the health and food security situation in the country, and for child development, as our findings suggest that a very large proportion of the children of tenants and estate laborers do not attend school because they are employed on the estates.

The migration and, in some cases, permanent resettlement of tenants, laborers, and their family members also appears to be having a substantial long-term impact on the distribution of population within the country. While the national population increased by an average of 3.66% per annum between 1977 and 1987, the population growth rates for those Districts featuring a large number of tenants generally increased at a much faster pace, sometimes exceeding 5% per annum. In the Table below, the two districts within each of the Northern, Central, and Southern Regions with the largest number of tenants are separated out, with their population growth rates compared with the overall regional population growth rates. Each of these districts with many tenants has had population growth rates well above the regional averages.

Table 5: Regional and District Population Growth Rates
(Average Annual Growth Rates (%), 1977-1987)

Region	District	Growth Rate
Northern		3.37
	Mzimba	3.63
	Rumphi	4.18
Central		3.76
	Kasungu	5.10
	Mchinji	4.48
Southern		3.65
	Mangochi	4.97
	Machinga	4.11
Malawi		3.66

(Source: Malawi Population and Housing Census (1987))

As discussed in Beyond 'Dualism', the Malawi (leasehold) estate sub-sector is highly diverse, with estates ranging in size from

less than 10 hectares to over 1000 hectares and with wide differences in management and overall organization. While in numerical terms, estates of less than 30 hectares are now predominant (accounting for some 68% of the total number of estates at the end of 1989), in terms of actual landholdings and cash crop production, the large estates still account for well over half of the estate sub-sector.

As a result, both estate employment and the resident worker population on estates is still at the present time heavily concentrated on medium-to-large-scale estates. No data are available on the employment of permanent (or casual) laborers according to estate size category. However, we would estimate that 80% or more of the permanent laborers on estates are employed on large estates (eg. above 100 hectares.) Both the tea and flue-cured tobacco industries, the largest employers of permanent laborers in the estate sub-sector, have production patterns which are dominated by large-scale estates. The two large-scale sugar estates presently employ 12,200 wage workers.

The patterns emerging within the expanding burley tobacco industry are somewhat different, although the numerically limited large-scale estates in this industry still account for the greatest share of production, tenants, and the resident tenant population. An indication of this is provided in the table below, which is based on the same analysis underpinning Table 4 above. The table indicates that about 2/3 of tenants and the tenant population is resident on medium-to-large-scale estates.

Table 6: Tenants and Tenant Population by Estate Size Category*

Estate Size Category	Number of Tenants	Estimated Resident Tenant Pop. **	Share of Total
Up to 15 Ha.	13,741	79,011	13.4%
15.01 - 30 Ha.	21,575	124,056	21.3
30.01-100 Ha.	28,162	161,932	27.6
100.01 + Up	38,487	221,300	37.7

*Derived from MOA tobacco quota files with conversions based on assumed tenant plantings of 0.6 hectares and yields of 900kg./ha. on estates less than 30 ha., 1000kg/ha. on estates 30-100 ha. and 1250 kg./ha. on estates above 100 ha.

**Based on an average tenant household size of 5.75. Survey findings indicate that average tenant household sizes tend to be larger on larger estates, hence the proportions indicated may overestimate the tenant population on small estates and underestimate that population on larger estates.

(Source: Derived from Ministry of Agriculture Tobacco Quota Data)

These patterns of distribution for estate laborers and tenants have important implications for the overall social welfare of such workers as well as the potential for rapid improvements in this area. As will be indicated below, levels of worker/tenant remuneration and the availability of social amenities are considerably greater on the medium-to-large-scale estates than on the small-scale estates. The distribution of estate workers according to estate size category is of significance both in the design of schemes to monitor changes in tenant/laborer welfare within the estate sub-sector and in the identification of groups within the estate labor force (and among their dependants) which may be vulnerable to health, nutritional, or other deficiencies.

B. Socioeconomic Characteristics of Tenants and Permanent Laborers

In this section, we draw upon our case study results and previous studies to discuss and compare the socioeconomic characteristics of tenants and permanent laborers on estates. Little information is currently available on the background of casual laborers on estates, this being an important subject for future research since it is among these casual laborers that we find the most vulnerable households and individuals participating in the estate labor market.

Worker Age

A comparison of the ages of our sampled tenants (eg. household heads) and permanent laborers indicates that permanent workers tend to be considerably younger than tenants, the mean ages for the two samples being 27 years and 38 years respectively. Nearly 30% of the sampled permanent laborers were teenagers and 71% were less than 30 years of age. Very few permanent laborers are older than 40. In contrast, among the sampled tenants, the youngest is 23 years old and half of the sample is 40 years or older. These findings for tenants are consistent with the results of Nankumba's (1988) survey of 330 tenants, for which the average age was 40.6. The age distribution for our samples is presented in Table 7 below.

Table 7: Estate Worker Distribution by Age Group
(Numbers of Tenants and Laborers)

Age Group (Years)	Tenants	Laborers
<20	0	8
20 - 29	10	12
30 - 39	6	5
40 - 49	10	2
50+	5	1
Unsure of Age	1	1
<hr/>		
# of Cases	32	29
Mean	37.95	26.75
Std.Dev.	10.48	10.47
Minimum	23	12
Maximum	58	63

(Source: Case Study Field Work 1991)

Gender, Marital Status, and Household Characteristics

All but two of the sampled tenants and permanent laborers are males, reflecting the dominance of males within these categories of workers. As indicated earlier, females comprised only 8% of the permanent labor force on our larger, five-district sample of 119 estates. Similarly, females constituted only 7% of the estate permanent labor force sampled by Nyanda (1989). Registered

tenants are almost universally males, although some cases of female tenants were found within our sample and other visited estates. Such female tenants are typically either relatives of the leaseholder or manager or are widows who have been allowed to remain on the estate after the death of their husbands who were former tenants.

Estate owners/managers prefer that tenants be married as this normally implies that the tenant will be accompanied by their spouses and children who will assist in the cultivation of the burley crop and perhaps perform other work on the estate. This preference for married tenants also stems from the reasoning that married tenants (with dependents) will be less inclined to desert the estate in the middle of the growing season. Amongst our sample, 30 of 32 tenants are married, the others being either divorced or separated. In these cases, the 'tenant' consisted of two adult males who have joined together as a team. In contrast, only 45% of permanent laborers sampled (eg. 13 of 29 cases) are married or have ever been married.

Significant differences are apparent in the size and composition of estate worker households. Among tenants, the average household size is 5.72, a figure well above the national average which is less than 5.0. Half of the sampled tenants reported a household size of six or more members. The reason for this is not that tenants tend to have more children than others in Malawi. Instead, quite a few tenants have brought with them not only their wives and children, but also additional adults to work on their allocated plot. For example, most of the younger tenants (eg. less than 30 years old) have cousins, brothers, and/or in-laws living within their households on the estate. Some of the older tenants (eg. above 50 years old) have nieces, nephews, and grandchildren living within their households on the estate. Some tenants even have full-time hired workers living within their household at the estate. For the tenant sample as a whole, the average number of adults per household was 2.9.

In sharp contrast, nearly one-half of the sampled permanent laborers live alone and only 28% (eg. 8 out of 29) have children living with them on the estate. In only two cases, were there three or more adults living within the household of a permanent laborer. The survey data on household size is summarized in the Table 8 below.

Another interesting finding is that more than one-fourth of our sample of tenants (eg. 9 of 32 cases) are actually relatives of the estate owners, being either sons, sons-in-law, brothers, or nephews of the estate owner. This pattern appears to be especially common on the smaller 'graduated smallholder' estates whose emergence and operating characteristics were discussed in Beyond 'Dualism'.

Table 8: Estate Worker Household Size
(Only Household Members Living on Estate)

Household Size	Tenant	Laborer
1	0	14
2-3	6	7
4-5	10	4
6-7	9	4
8+	7	0
<hr/>		
Number of Cases	32	29
Mean HH#	5.72	2.59
Std. Dev.	2.00	1.88
Minimum	2	1
Maximum	10	6

(Source: Case Study Field Work 1991)

Formal Education and Literacy

From our case study research, little difference can be discerned between the average number of years of education and the extent of literacy among tenants (household heads) and permanent laborers. For both groups, the average number of years of formal education is 3. Still, for both groups there are wide variations in educational backgrounds, with standard deviations being almost as large as the sample means. While more than one-third from each sample reported having had no formal education, nearly another one-third reported five years or more of education. More than 40% of both tenants and permanent laborers report that they are literate, this being above the national norm. The research results are presented below.

Table 9: Formal Education and Literacy Amongst Workers

Years of Education	Tenants	Laborers	Total	Proportion
0	11	11	22	36.1%
1-2	4	1	5	8.2
3-4	8	8	16	26.2
5-6	2	5	7	11.5
7-8	6	2	8	13.1
9+	1	2	3	4.9
<hr/>				
Number of Cases	32	29		
Mean	3.06	3.14		
Std. Dev.	3.05	3.09		
Minimum	0	0		
Maximum	9	10		
% Report That Can Read	40.6%	48.3%		
% Report That Can Write	43.7	51.7		

(Source: Case Study Field Work 1991)

Place of Origin

As indicated in Table 10 below, the case study research found that only a small proportion (eg. 15%) of tenants and permanent laborers working on Kasungu estates originate from this district. Lilongwe District is the single most important place of origin for both tenants and laborers, accounting for some 28% of the sample. Many other workers originate from districts adjacent to Kasungu and other districts within the Central Region. For the sample as a whole, 78.7% of workers originated from the Central Region, 13.1% originated in the Southern Region, and 8.2% are refugees from Mozambique. None of our sampled workers originate from the Northern Region.

These findings are largely consistent with the results of earlier surveys of estate workers in Kasungu District. For example, in Nankumba's (1988) survey of 330 tenants, only 14% originated from Kasungu District, although 76% originated from within the Central Region. An additional 23% of the sampled tenants migrated from the Southern Region, while only 1% originated from the Northern Region. In Nyanda's (1989) survey of 237 tenants and laborers working on Kasungu estates, 62% reported originating from districts within the Central Region, 34% from the Southern Region, and only 4% from the Northern Region.

Table 10: District of Origin of Sampled Estate Workers

Region/District	Tenants	Laborers	Total	Share
Central Region	26	22	48	78.7%
Of Which:				
Lilongwe	10	7	17	27.9
Kasungu	6	3	9	14.8
Dowa	4	2	6	9.8
Dedza	1	3	4	6.6
Ntcheu	1	3	4	6.6
Others*	4	4	8	13.1
Southern Region**	5	3	8	13.1%
Northern Region	0	0	0	0.0%
Mozambique	1	4	5	8.2%
Total Cases	32	29	61	

*Including Mchinji(3), Ntchisi(2), Nkotakota(1), and Salima(2).

**Including Machinga(2), Mulanje(2), and one each for Blantyre, Mangochi, Thoyolo, and Chiradzulu.

(Source: Case Study Field Work 1991)

While Kasungu is by far the country's largest tobacco-producing district (accounting for about one-half of total licensed production), when examining the broader patterns of estate employment nation-wide, the Southern Region may be at least as important as the Central Region as the place of origin for tenants and permanent estate laborers. For example, in Nyanda's survey of estate workers in Rumphi District in the north and Mangochi and Mulanje Districts in the south, districts within the Southern Region were the predominant places of origin. Both the short- and longer-term patterns of rural-to-rural migration associated with estate employment is an area requiring further research.

Land and Livestock Holdings of Estate Workers

It is frequently presumed that those attracted to employment in the estate sub-sector are landless or near landless (Sahn, Arulpragasam, and Merid (1991, p.26); Nyanda (1989, p.7). Results from our case study research reveal considerable differences in the landholdings at home for tenants and permanent laborers. Our sample of tenants were found to be relatively well endowed with land, both in comparison with permanent laborers and in comparison with the national patterns of landholdings amongst smallholder farmers. While one-fourth of the sampled tenants do report being near landless (eg. having less than 0.5 of a hectare of land), more than one-third of the tenants have landholdings off the estate exceeding 2.0 hectares. While this rate of near landlessness is similar to the national average, the proportion of tenants with larger landholdings far exceeds the national average. It appears that for nearly half of the sampled tenants, their landholdings off the estate (eg. at 'home') exceed the land area upon which they cultivate crops on the estate. Whether or not the additional adults populating the tenants' households (eg. siblings, cousins, etc.) have their own land off the estate was not investigated.

In contrast, some 41% of our sampled permanent laborers (eg. 12 of 29 cases) reported having less than 0.5 of a hectare of land at home, this rate of near landlessness being higher than the national norm. The majority of these near landless laborers are young people, who have just left their parents' farm. For the ten permanent laborers less than 20 years old, the average landholding at home was only 0.58 of a hectare, compared with an average landholding size of 1.72 hectares for permanent laborers 30 years and older. As in the case of tenants, landholdings amongst permanent laborers are quite varied. Six permanent laborers reported having landholdings exceeding 2.0 hectares at home. The case study results, together with a comparison with national patterns, are presented in the Table below.

Table 11: Landholdings Outside the Estate for Estate Workers

Landholdings (Ha.)	Tenant		Laborer		All Smallholders*
	Freq.	%	Freq.	%	
<0.5	8	24	12	42	26
0.5-<1.0	4	12	4	14	30
1.0-<2.0	7	22	3	11	31
2.0-<3.0	7	22	3	11	8
>3.0	6	19	3	11	5
Doesn't Know			3	11	
<hr/>					
Number of Cases	32		29		
Mean	2.18		1.34		
Std.Dev.	2.72		1.56		

*Unpublished results of the 1987/88 Annual Survey of Agriculture, Ministry of Agriculture, Planning Division. The data do not include completely landless households.

(Source: Case Study Field Work 1991)

Within the tenant sample, an interesting finding was that those tenants who are relatives of the estate owner tend to own little or no land off the estate. The average outside landholding for such relative/tenants (eg. 9 of 32 cases) was only 1.01 hectares compared with average landholdings of 2.65 hectares for the remainder of the tenant sample.

A significant proportion of both tenants and laborers within our sample have invested in one or more types of livestock, the most important being chickens and goats. As Table 12 below indicates, most livestock holdings are kept on the home farm rather than on the estate where the workers are employed, this being a reflection of the limited amount of time which some workers have spent on their current estate and/or possible restrictions against livestock holdings on the estates. The main exception to this is the quite common pattern of tenants raising chickens on the estate. Over 56% of the sampled tenants (eg. 18 of 32 cases) reported raising chickens on the estate, in seven cases owning ten or more chickens.

In addition to land and livestock, the most common and significant asset held by the sampled workers is a earth-rammed or pole, grass, and mud house on their home farms. Twenty-one permanent laborers and sixteen tenants reported having a house on their own land. While a limited few workers report having ox-carts, bicycles, beds, sewing machines, and chairs, more than one-fourth of the tenant sample (eg. 9 of 32 cases) report owning a radio.

Table 12: Sampled Estate Workers with Livestock Holdings
(Numbers of Workers and Animals)

	Tenants			Laborers		
	Home	Estate	Total Animals	Home	Estate	Total Animals
Chickens	4	18	258	8	5	116
Goats	11	1	70	8	0	55
Pidgeons	0	5	68	2	0	10
Pigs	1	0	11	0	0	0
Cattle	4	0	10	3	0	9
Oxen	0	0	0	2	0	20
Donkey	0	0	0	2	0	3

(Source: Case Study Field Work 1991)

Previous Work Experience

Our case study results indicate that the vast majority of tenants and permanent laborers did not have experience growing tobacco prior to their original entry into the estate labor force. This is consistent with the earlier survey findings of Nankumba (1988). Both among permanent laborers and tenants, one-third or more of respondents indicated that before entering the estate labor force they were growing maize and other food crops on their home farm. An additional one-fourth of the sample for both groups indicate that they were engaged in either off-farm employment or the sale of food/herbs/fish just prior to entering the estate labor force. A very significant finding is that 25% of those who are presently tenants, entered the estate labor force first as permanent laborers, presumably to gain experience in tobacco production before growing it themselves as tenants. Table 13 below indicates the work or activity done by tenants or permanent laborers before taking up these positions.

Table 13: Activity Prior to Current Type of Estate Work*

	Tenants		Laborers			
	Freq.	%	Freq.	%		
Food Crop Farming	10	34	12	41		
Off-farm Employment**	8	28	5	17		
Estate Laborer	8	28	NA	NA		
Tobacco Farming (Home)	3	10	1	3		
Cotton Farming (Home)	0	0	3	10		
Selling Food Items	0	0	3	10		
Other***	0	0	5	17		
Missing Cases****		3	10		0	0

*Workers were asked what they were doing prior to their current job and what they did prior to that.

**Includes work abroad.

***Includes attending school and helping parents.

****Three tenants indicated that both their previous work and the work before that involved being a tenant on other estates.

(Source: Case Study Field Work 1991)

Our analysis of the prior work patterns for tenants and for permanent laborers suggests that the most common work or 'career' paths taken are those indicated below. The first activity listed in each series is that which was undertaken at the home village. References to 'estate laborer' pertain to permanent or regular employment.

Common 'Career' Paths for Estate Workers

Farming Maize ->Estate Laborer ->Tenant ->Tenant on Other Estate
Farming Maize ->Off-Farm Employ. ->Estate Laborer ->Tenant
Attending School/Helping Parents ->Off-Farm Employ.->Est. Laborer
Attending School/Helping Parents ->Off-Farm Employ. ->Tenant
Attending School/Helping Parents ->Estate Laborer
Farming Tobacco ->Tenant ->Tenant on Other Estate

As the above discussion indicates, estate tenancy represents a position generally taken by more experienced or mature individuals, with work as a permanent laborer on an estate frequently providing a stepping stone into a subsequent position as tenant. An interesting finding from our case study research is that none of the 32 tenants interviewed report having held another job on their current estate. This indicates that their advancement from being laborers to being tenants was also associated with their migration from one estate to another.

The large majority of permanent laborers in our sample have come to the Kasungu area only within the past five years and have relatively short work histories within the estate sub-sector. Only three out of twenty-nine permanent workers came to the area of their current employment prior to 1987. More than one-half of the sample (eg. 16 of 29 cases) report coming to the area only in the past year or two. The patterns are somewhat different for tenants. Nearly one-half (eg. 15 of 32 cases) of the sampled tenants have been in their current work area for five years or more. For the sampled tenants, the average number of years in which they have served as a tenant on their current or any other estate was 4.03, with more than one-third (eg. 11 of 32) of the sample being tenants for five years or more.

Tenant movements between different estates appears to be quite common. More than one-half of our sample (eg. 17 of 32 cases) were on their current estate for the first year. In Beyond 'Dualism', we reported that the average rate of tenant turnover between the 1988/89 and 1989/90 seasons for ninety estates was 31%. Tenant turnover appears to be considerably higher on smaller estates than medium-to-large-scale estates as a result of the poorer income-earning prospects and living conditions on the smaller estates. From our 1990 survey, the rate of tenant turnover was 40% for estates less than 30 hectares, 32% for medium-scale estates (eg. 30-100 hectares), and 29% for large-scale estates (100.01 + Ha.). On some larger, well-established estates, there are tenant households which have remained for ten

years or more and intend to make the estate their permanent home.

Motivations for Becoming a Tenant or Permanent Laborer

The motivations for seeking employment on estates appear to differ between permanent laborers and tenants. With respect to permanent laborers, estate employment is attractive either because they do not have any land of their own to farm back at home or because they need to acquire some capital in order to develop what small landholdings which they do have. Among the sampled tenants, it is not land hunger, but a search for improved income opportunities via burley tobacco production which has attracted most of them to become tenants. Many tenants are would-be entrepreneurs, hoping to earn sufficient incomes from tenancy in order to start their own businesses, purchase inputs to grow tobacco or other cash crops at home, or invest in livestock. Some of the younger tenants (in their 20s) hope to gain experience and income from tenancy so that they can later develop their own estates.

C. Worker Recruitment, Tenancy Arrangements and Employment Terms

This section draws upon case study and survey findings to examine the means of tenant/laborer recruitment, the nature of the tenancy relationship, and the terms of employment for permanent laborers.

Tenant and Laborer Recruitment

Tenants and laborers are recruited to estates by a number of different means. In our sample, the majority of workers (38 of 64 cases) came to the estate personally to apply for employment, either coming from their home village or coming from another estate in the area where they were previously employed. A further 16% of tenants/laborers got their present position via the assistance of a friend or relative who was previously employed on the estate. Only about 20% of such workers (eg. 12 of 62 cases) were recruited from home by the estate owner or manager. The typical means of such 'recruitment' is to drive a lorry to a densely populated area, inquire whether anyone is interested in becoming a tenant or laborer, and then load the new workers into the lorry for immediate transport to the estate. Such people will not have observed the conditions on the estate prior to accepting employment there.

Little difference was discerned in the recruitment patterns of tenants vs. laborers, of married vs. single workers, or among workers of different age groups. Not surprisingly, the vast majority of near landless workers personally migrated in search of work at the estate. This is shown in the table below:

Table 14: Worker Recruitment and Worker Landholdings at Home
(Numbers of Tenants and Laborers Combined)

Means of Recruitment	Landholdings at Home				Total
	<0.2	.21 <1 Ha.	1 <2 Ha.	2+ Ha.	
Worker Came to the Estate to Apply	9	9	8	12	38
Worker Recruited From Home Village	0	4	3	5	12
Worker Recruited Via Relative/Friend	0	2	2	6	10
Other Means	0	0	2	2	4

(Source: Case Study Field Research 1991)

While such recruitment patterns may be representative for the Central Region, previous studies (eg. Nyanda (1989); MJB (1990)) have suggested that in the estates in the Northern Region, the more common pattern is for estate owners to recruit tenants and laborers from their homes, transporting them and their belongings at the beginning of the production season. Such recruitment is concentrated in several districts within the Southern Region, where population densities are greatest and the proportion of near landless people is highest.

Tenancy Arrangements and Employment Terms

When the estate sub-sector was confined to a limited number of large-scale estates, most estate owners hired tenants and permanent laborers on the basis of written contracts, standardized across the entire sub-sector (Watson (1964)). However, with the rapid expansion of the estate sub-sector, it is now only a relatively small proportion of estates (eg. a few large corporate or privately-owned estate companies) which enter into written agreements with their tenants and laborers. The vast majority of estate owners/managers operate under oral, non-legally binding agreements with their tenants and laborers. These oral agreements vary enormously in the range of employment terms which are pre-specified at the time of recruitment and the actual content of these terms.

Results from our case studies indicate that in many instances, several of the terms which serve to define the tenancy or employment relationship may be initially overlooked or left ambiguous, with attention initially focused only on the nature of work to be performed. Frequently overlooked or left ambiguous in such oral agreements are various aspects of social welfare, including food supplies, housing, and health care. Such areas are considered to be of 'secondary' importance by many estate owners and managers.

The Tenancy Relationship

Tenancy on estates involves more than simply a contract, explicit or implicit. It entails a more complex relationship between the tenant (and his family) and the owner and those individuals whom the owner has delegated authority on the estate (eg. the manager and clerk). This relationship may last only one season or may continue over an extended number of years. In some cases, the tenant (and his family) may become permanent residents on the estate, moving there all or most of their material possessions. The tenancy relationship thus combines economic and socio-political elements. In the discussion below, the tenancy relationship is sub-divided into four constituent elements, namely: 1) tobacco production, support, and sale, 2) tenant household subsistence, 3) social amenities, and 4) patron-client

inter-relationships.

Tobacco Production, Support, and Sale

For both estate owner and tenant the core or essence of the tenancy relationship revolves around the production and sale of a (burley) tobacco crop. This is the only reason why the tenant has been recruited to the estate by the owner and this is the primary reason why smallholders have become tenants. For the purpose of tobacco production, tenant families are allocated a plot of land, normally rent free. The size of this land varies from 0.4 of a hectare to up to 2 hectares, depending on the size and development of the estate, the household size and experience of the tenant, the quality of land, and other factors. In our 1990 survey, the most commonly reported land area allocated for tenant tobacco production was 0.6 of a hectare.

On this plot of land, the tenant (and his family) have primary responsibility to carry out most tobacco cultivation practices, including land clearing, fumigation, nursery management, ridging, planting, weeding, fertilizer application, and reaping. These activities are normally undertaken with some instructions from the manager and/or capitaio. For some activities (eg. land clearing, nursery management, fertilizer application, reaping), the tenant receives assistance from the estate or there is joint responsibility.

To enable the tenant to produce a tobacco crop, the owner provides a range of material inputs and services. Material inputs typically include a hoe, a sickle, a panga, one or more watering cans, fertilizers CAN, urea, and D compound, and, in some cases, the chemical EDB for fumigation. Estates either provide thatch and poles for tenant tobacco barn construction or allow the tenant to gather such materials from the estate lands. The services provided vary among estates. All estates providing material inputs provide them on credit, hence credit services are an integral part of the tenancy relationship. Some additional services are provided only on large estates. These include tractor ploughing of tenant plots and tobacco curing services in holding barns. Other services are more common throughout the range of estates. These include management and labor support services during tobacco nursery preparation and more general labor services, with permanent or casual laborers being assigned to individual tenants during peak labor demand periods.

Such inputs and services are provided at different times in the production season as the following table illustrates:

Table 15: Illustrative Inputs and Service Supply Calendar
(Most Common Months of Supply)

	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr
<u>Material Inputs</u>										
Hoe	X	X								
Sickle	X	X								
Panga	X	X								
Watering Cans		X								
CAN						X	X			
Urea						X	X	X		
D Compound					X					
Thatch/Poles	X	X								
<u>Services</u>										
Ploughing	X									
Nursery Prep.		X	X							
Hired Labor		X	X				X	X	X	
Curing										X

Source: Case Study Field Research (1991)

For each of these inputs and services, the tenant is charged a cost which is deducted from his end-of-season tobacco revenues. While the Tobacco Association of Malawi (TAMA) does publish a list of recommended unit costs for inputs to be charged to tenants, the costings are entirely at the discretion of each estate owner or manager. In many instances, tenants are not informed of the costs of such inputs/services until the end of the season when their final balance is determined. In our sample of 32 tenants, interviewed in March, only two knew how much they would be charged for fertilizers this season and only five knew the costs of the tools which they were provided. The failure of estate owners to specify their unit costs for inputs results in uncertainty amongst tenants and suspicion that they will be (or have been) cheated.

The policies of estates vary with regard to such costings. Some estates charge tenants the actual purchase costs or even subsidize some inputs (Agmark (1989)). On these estates, the unit costs for inputs are frequently posted in the manager's or clerk's office. Much more commonly, estate owners add interest or other charges to such costs, anywhere in the range from 5% to 50%. On our case study estates, bags of fertilizer purchased by the estate at K 25/bag are supplied at K 30/bag to tenants. Similar mark-ups of 20-25% were common for tools. In interviews with estate owners and managers, we have found that some (especially smaller-scale) estates do not pre-specify tenant charges for individual inputs. Instead, these estates pragmatically cost their inputs at the end of the season in line with actual or expected results from the sale of tobacco. The

lack of transparency in the terms of inputs credit may thus work to the advantage of estate owners and disadvantage of tenants.

Through cost deductions for services rendered, estate owners also have the capacity to transfer estate overhead costs to tenants. This is most evident with estate charges to tenants for land ploughing and for 'management services'. Charges for land ploughing, typically in the region of K 140 -200 per tenant, are designed to defray the depreciation costs on ploughs and tractors. Those estates charging for management services, typically charge tenants sums which bring the total payment many times larger than the actual pay of managers. For example, one estate visited as part of in our 1990 sample survey charged each of its 56 tenants K 59.00 for management services, bringing a total charge of K 3304. The manager reported that his total pay for the year was K 300. The remaining deductions were presumably used to cover other estate overhead costs.

Estate owners can also transfer their overhead costs for permanent laborers onto the accounts of tenants. Most estates visited charge their tenants between K 1.74 (the official minimum wage) to K 3.00 per day for each day that a permanent (or casual) laborer is assigned to them for peak period work. As will be indicated below, relatively few estates actually pay their laborers such wage rates. Even when hired laborers only work a part of a day on the tenant's plot, the tenant is normally still charged for a full day of laborer's input since as one manager indicated, "the laborer must be paid a day's wage in any case". This notion that tenants will (help to) cover the estate's overhead costs is never explicitly agreed upon between the parties, yet appears to be very common among estates of all size categories.

The tenancy system entails an implicit sharing of production risks between tenant and estate owner. While the estate owner incurs the initial financial costs required to establish the tobacco crop in the field, the tenant invests his and his family's time in doing the same. Both parties risk losses from potential crop failure--the owner's in straight financial costs and the tenants in terms of opportunity costs.

The distribution of benefits from the tenant's production of the tobacco crop depends upon many factors, including the yields obtained, the costs charged for production inputs and services and food supplies (see below), the grading and weighing arrangements employed, and the prices at which the owner buys the tobacco crop from the tenant. Each of these are highly variable. With respect to tobacco grading and pricing, many different systems appear to be in operation, entailing different degrees of 'fairness'.

The most fair system is the officially-sanctioned system of grading tobacco by its size, color, and overall firmness with many individual grades. Estates following this system normally

apply a pricing system resembling the TAMA maximum price rates. It is more difficult to say what the least 'fair' system is. On some estates, tenants are instructed to grade tobacco only into two or three rough grades linked to either color or length. The estate owner then assigns buying prices to these rough grades. In other estates, no grading is done for the bottom and middle leaves (normally the highest quality leaves), but is done for the lower-quality top leaves. A single price is paid for the bottom and middle leaves and other, much lower prices are paid for the graded top leaves. In still other estates, grading is not done on the estate, but by a professional grader with the results reported back to individual tenants. Prices are then assigned to whatever grades are reported back. The variability in these grading and pricing systems, together with their lack of transparency in some cases, generates uncertainties and misconceptions as well as the potential for unfair treatment of tenants.

Tenant Household Subsistence

Another major element of the tenancy relationship concerns the provisions for tenant household subsistence. Estates have different policies with regard to the allocation of land and other resources to tenants to undertake their own food production. Some estates do not allocate land for this purpose, either because of limited land areas, the belief that tenants will allocate too much of their labor time to the food crop, and/or a calculated strategy to earn additional income through their food ration distribution system (see below). Other estates strongly encourage tenants to plant food crops as part of the estate's overall crop rotation pattern and in order to minimize the need for tenants (and their family members) to undertake ganyu work on other estates.

Our 1990 survey data indicate that nearly one-third of those estates which do have tenants did not allocate any land to these tenants to produce food crops. This ratio was higher for small estates (eg. less than 30 hectares) than for medium-to-large-scale estates. In that survey, the average area allocated to tenants for food crop production was found to be larger on the large-scale estates, but not by a great margin. Still, more than one-third of the medium-to-large-scale estates (eg. 30 hectares+) which do allow tenant food production allocate 0.50 or more to each tenant for this purpose. These patterns are summarized in Table 16 below.

Frequently when land is allocated for food crop production, the estate also provides maize seed (on credit) either of local or hybrid varieties. When the maize is to be for tenant household consumption, fertilizer is not generally supplied to the tenant. In some estates, especially large-scale estates, the maize produced by tenants is supposed to be sold entirely to the estate at a price set by the estate manager. Such supplies are normally

then provided (sold) back to the tenants in the form of food rations for which deductions are made from tobacco income. When this system is in operation, estates normally supply tenants with fertilizer for their maize crop since this maize purchase and re-supply system tends to be quite profitable for the estate. Margins in the order of 25% to 36% appear to be quite common for these transactions. For example, one estate indicated that during the 1989/90 season it purchased maize from tenants at K 22/bag and then sold back such supplies as rations to tenants at K 30/bag. As this estate bought and then re-sold 431 bags of maize, its profits from its maize account (not considering storage costs) were K 3448.

Table 16: Estate Areas Allocated for Tenant Food Crop Production
(Number and Proportion of Estates)

Area for Food Crops (Per Tenant)	Estate Size Category (Hectares)				Total
	0-15	15.01-30	30.01-100	100.01+	
No Area	7	8	6	7	28 (31%)
.01- <.25 Ha.	1	5	4	5	15 (17%)
.25- <.50 Ha.	8	7	4	4	23 (26%)
.50 + Ha.	3	4	9	8	24 (27%)
<hr/> Total Estates	19	24	23	24	90
Total Tenants	79	119	235	1189	1622
Mean Area	0.39	0.29	0.33	0.49	0.45

(Source: Field Survey 1990)

The vast majority of estates do provide food rations to tenant households, drawn from estate own production, production purchased from tenants, and supplies purchased from ADMARC or other sources. In most cases, food rations consist of only maize or maize flour. The length of time for which rations are provided varies among estates. In our 1990 survey, estate managers reported ration periods as covering from four to nine months, with an overall average of 7.7 months. Rations typically begin in August or September and continue through to February or March, depending upon the availability of supplies.

Social Amenities

The third major element of the tenancy relationship concerns housing and other social amenities. The majority of tenants live within the estate with their families. While a limited number of

well-established estates do provide tenants with small houses, in the vast majority of estates, housing is the responsibility of the individual tenant. While frequently permitted to source mud, thatch, poles, tobacco stalks, and other materials from the estate grounds, it is the tenants' responsible to construct their own homes.

The results from our 1990 survey as well as the present case study research indicate that the housing for tenants is generally very poor. In our 1990 survey, only fifteen estates from a total of 119 featured brick-walled houses for any of its tenants and only in four cases were brick houses the most common type of housing. Instead, most tenant housing was found to consist of small grass, reed, or mud-walled huts with grass roofs. Such huts were typically 9 -12 square meters in size-- this to accommodate an entire family! While large-scale estates (eg. 100+ hectares) had the greatest incidence of brick-walled houses, grass- or mud-walled houses were predominant on most estates and across all estate size categories. In some cases, these houses are comparable to the huts found in the smallholder sub-sector; in most other cases, tenant housing was found to be far worse than the norm in smallholder villages.

The reasons why estate owners do not construct permanent housing structures for their tenants is not immediately evident, although for smaller estates, the absence of capital may be an important factor. On those estates not practicing crop rotation, the failure to investment in tenant housing may stem from the expectation of having to shift tobacco production to different parts of the estate and soil fertility is reduced. As tenants should be housed near to their tobacco plots (eg. to prevent theft), this strategy of 'shifting cultivation' on the estates inhibits investment in permanent housing structures. This is not a sound argument against permanent housing structures, however, given that small temporary shacks could still be built next to the tobacco fields for someone to stay and guard the ripening tobacco, while the tenant family resides in decent housing.

The reluctance of tenants to build larger, more permanent houses stems from their uncertainty regarding the length of their stay on the estate. If they decide to stay only one season on the estate or if they are dismissed, than the energy and resources which they have invested in constructing a more permanent house would have been wasted. One does find cases of fairly sizeable and well-built tenant houses in instances where the tenant has remained on the estate for many years and intends to make the estate the permanent home for his family.

In most of the estates, the poor quality of tenant housing is compounded by the poor sanitary conditions prevailing within the tenants' residential area. More than one-fourth of our 1990 sample of estates (eg. 30 of 119 cases) reported not having a single latrine on the estate. Where latrines exist, they are typically communal pit latrines located nearby to tenant's huts.

Rubbish bins are not commonly found within the tenants' residential areas.

The availability of clean drinking and washing water appears to be a problem on a large number of estates, despite the stipulation in the estate leasehold covenant that such a source of clean water be available. As Table 17 indicates, only 8% of the estates included within our 1990 sample have a functional water tap, only 19% have a functional bore hole, and only one-half have a functional water well. As the table indicates, the availability of clean water seems to be much more common on large estates than on small-to-medium-scale estates. Survey results also show that while the vast majority of estates leased prior to 1980 have either a water tap or bore hole, both of these water sources are rare on estates leased in 1987 and later.

Table 17: Water Facilities on Estates
(Number and Proportion of Estates)

Functional Water Source	Estate Size Category (Hectares)				Total
	0-15	15.01-30	30.01-100	100.01+	
Water Tap	1 (4%)	0	1 (3%)	8 (29%)	10 (8%)
Bore Hole	3 (11%)	1 (3%)	7 (23%)	11 (39%)	22 (19%)
Water Well	10 (37%)	19 (58%)	17 (55%)	13 (46%)	59 (50%)
Total Cases	27	33	31	28	119

(Survey: Field Survey 1990)

Relatively few estates provide general medical services to their workers and families, with only a limited number of (large-scale) estates having medical clinics per se. Most commonly, estate owners will provide basic medicines (eg. aspirin, chroloquine) and have treatments for minor injuries. In the event of more serious illness or injury, some estate owners/managers will provide transport to their workers to visit a government or mission clinic or hospital. While the cost of this treatment may be initially paid for by the owner, such costs are frequently deducted from the tenants income from tobacco.

Patron-Client Inter-relationships

Another important element of the tenancy relationship is the patron-client element. Unlike on large, corporately-owned estates where there is a professionally qualified hired manager and a hierarchical system of managerial decision-making and instruction,

the vast majority of Malawi's leasehold estates feature an owner/manager or relative/manager whose social and economic position vis-a-vis his tenants is one of a patron or "bwana" (eg. boss or master). It is this person that the tenant and his family is dependent upon for their everyday subsistence, especially during the hunger months of between December and February. This person is also the source of small intermittent cash loans for the tenant to acquire basic necessities (eg. salt, matches, kerosine, etc.). He also provides support in the face of emergencies (eg. illness) and tragedies (eg. funeral costs). He is frequently a father figure: a man who is both respected and revered. It is expected that the "bwana's" largesse in providing food, basic necessities, and other support will be reciprocated by the tenant, certainly by not questioning his authority and perhaps also by completing special tasks without pay (eg. helping to build or maintain the "bwana's" house).

The relationship between the tenant and his patron should be viewed in terms of an annual cycle, consisting of a series of distinct periods or stages. Over the course of this cycle, different degrees of cooperation and conflict between the two parties are evident. These periods/stages are as follows:

1) 'Honeymoon' Period (Late August to Early December)

During this period, the tenant-patron relationship has a spirit of cooperation and accommodation. Newly-recruited tenants are well treated since they are still potentially mobile. The new tobacco crop is seen as a joint venture with shared roles in nursery management and with the patron supplying a wide range of production inputs on credit. Food ration supplies are generally timely and adequate in quantity. Consumer goods may be supplied to tenants on credit, with the tenants' debt and degree of commitment growing on a daily basis.

2) 'Transitionary' Period (Mid-December Through January)

By this time, either the tobacco crop is well-established or it is fairly clear that a poor yield will be obtained. This is the best time for the tenant to dissent the estate if his tobacco crop looks poor and therefore unlikely to cover the inputs credit. By this month, maize supplies may be becoming short and the proprietors of small-to-medium-scale estates may encounter cash flow problems which inhibit their purchasing of grain in amounts sufficient to provide adequate food rations. If the tenant is only cultivating a tobacco crop, then this will be a period of reduced work-load, enabling one or more family members to undertake ganyu work outside of the estate. If the tenant also has a maize plot, then labor demands for this crop will be high at this time (for banking and weeding).

3) Period of 'Maximum Tenant Household Vulnerability' (Early February through Mid-March)

During this period, food supplies are likely to be especially short as maize supplies may have run out and neither the new maize crop nor the planted vegetables would have reached maturity. However, the tenant remains hostage to his tobacco crop. He cannot afford to go out for ganyu work or send his spouse because this is also a period of maximum labor input in the reaping of the tobacco. Should he send family members off for ganyu work, the tenant risks losing his entire tobacco crop, since the patron normally retains the right to confiscate an overripe crop in the fields using permanent laborers for reaping. This is a period in which food security/income trade-offs may be quite important for the tenant.

4) Period of 'Resuscitation' (Mid-March through Mid-April)

By mid-March, supplies of green maize and certain vegetables (eg. pumpkins) will be available to most tenant households, enabling them to recover from the hunger months. The household work-load for tobacco is also greatly reduced enabling a more liberal allocation of family members to do ganyu work on or off the estate. The tobacco crop is quietly curing in the tenants' barns, raising expectations of both tenants and patrons regarding future profits.

5) Period of 'Post-harvest Conflict' (Mid-April through June)

During this period, the tenant's tobacco is graded, weighed, and sold to the patron, the tenant's final balance is announced, and accounts are settled. This is a period in which conflicts over grading, pricing, cost deductions, and payments are quite common with some tenants perceiving that they have been cheated. This is also the time for tenant opportunism, whether in the form of selling tobacco to others, stealing tobacco from other tenants, or over-conditioning the tobacco to increase its measured weight. If the tenant household has grown their own maize, then food security is no longer a problem. However, for those without a maize plot ganyu becomes necessary as the estate food rations have stopped.

6) 'Redevelopment, Leisure, or Migration' Period (July and August)

For those tenants remaining on the estate, this is the time to re-build tobacco barns, do maintenance work on residential structures, or undertake leisure activities, including a possible visit to the home village. Those unhappy with the results of the prior season will use this time to migrate in search of a more generous patron.

It is important to keep the above tenancy cycle in mind when designing field research or monitoring systems related to the

estate sub-sector. Not only the attitudes which one encounters among workers and owner/managers, but also the prevailing economic and social conditions on the estate will be likely to vary substantially in the course of the production season. For example, assessments of the food security situation will most certainly be more positive if undertaken during the 'honeymoon' period than during the hunger months. Tracking inter-annual changes in estate worker welfare will thus require consistency in the timing of surveys.

Terms of Employment for Permanent Laborers

It is even more difficult to generalize about the terms of employment for laborers than was the case for tenancy arrangements. This is because of the considerable differences in the longevity or periodicity of work among individual laborers. Truly "permanent" laborers in the sense of full-time employees maintained over an entire calendar year and kept on an estate for several years running do not appear to be especially common outside of the flue-cured tobacco industry, although this may depend critically on the location and accessibility of estates. Most "permanent" laborers on burley tobacco estates appear to be employed on a particular estate for some four to seven months of the year, being free to seek ganyu or other employment during the remainder of the year.

In order to illustrate the lack of permanency for most so-called "permanent" laborers, an analysis was made of the employment patterns for wage laborers of one medium-scale (eg. 80 hectares) burley tobacco estate located in Lilongwe District. The table below presents these employment patterns, indicating the number of male and female wage laborers employed per month, the total man-days for which they were employed, and the average number of man-days per wage laborer.

Table 18: Wage Laborer Employment on Estate A (Lilongwe)

	Male Laborers			Female Laborers		
	Number	# of Man-Days	Average	Number	# of Man-days	Average
August	34	803	24	35	759	22
September	30	584	19	0	0	0
October	25	428	17	0	0	0
November	16	362	23	0	0	0
December	16	372	23	15	270	18
January	36	785	22	13	284	22
February	70	1236	18	66	913	14
March	138	3312	24	126	2445	19
April	100	2465	25	91	1521	17
May	77	1516	20	85	1800	22
Total		11863	22		7992	19

(Source: Case Study Field Research 1990)

The table shows the heavy concentration of wage laborer employment over a four-month period from February to May. Sixty-two percent of the man-days worked by males were undertaken over the March -May period, while 72% of the man-days worked by females were over this period. During other months during the season, relatively few wage laborers are employed.

Another way to examine these employment patterns is to distinguish between workers who might be considered daily ganyu workers, extended ganyu workers, and permanent workers. See the table below for such a breakdown.

Table 19: Employment Patterns for Estate A
(Number of Wage Laborers)

	Ganyu 1 -10 days	Extended Ganyu 11-20 days	Permanent 21+ days	Total
August	2	19	48	69
September	1	12	17	30
October	3	13	9	25
November	0	4	12	16
December	0	11	20	31
January	1	11	37	49
February	38	41	57	136
March	33	97	134	264
April	16	68	107	191
May	17	24	121	162

(Source: Case Study Field Research 1991)

The table provides insight into the labor hiring practices of this estate. Very few of its workers are employed on a full-time basis for the entire season. The low figure for October suggests that no more than nine people might be employed on such a basis. While a sizeable number of people are employed on a regular basis during the month of August, most of these are not needed over the subsequent four to five months. Only in January does regular employment reach levels approaching that for August. Beginning in February, large numbers of regular and intermittent workers are again employed. The data suggest that the majority of "permanent" laborers on this estate are employed on a full-time basis for only three months--March through May. The extent to which this pattern holds or differs among different types and sizes of estates is an area requiring further research.

"Permanent" laborers are hired for multi-purpose duties on the estate and work directly under the control and supervision of the estate owner or manager. One day they may be assigned to constructing or repairing a tobacco holding shed; the next day

they may be called upon to dig a well or assist a tenant with tobacco reaping. Their work day may range from only a few hours to up to twelve hours a day, depending upon the existing workload. During the slack periods, they may work only a half-day on the estate and do ganyu work for another estate during the afternoon. For "permanent" laborers, payment will be made either on a monthly or seasonal basis. Only those laborers who are employed on a regular basis for several months will be provided with housing on the estate; the other laborers will have to sleep in tobacco barns, equipment sheds, or in similar structures. Either food rations or cooked food is provided to regular workers.

As permanent laborers are frequently on the estate without their families and as they are not tied to the estate in the same way as the tenant with his maturing tobacco crop, their treatment from the estate owner does not follow the same cycles as in the tenant-patron relationship, since the laborer is always potentially mobile. As in the case of tenants, permanent laborers may also receive small cash advances from the estate owner to use for buying basic necessities.

D. Estate Worker Remuneration and Food Security

The contribution of the estate sub-sector to poverty alleviation and overall rural development in Malawi depends in part upon the levels of remuneration for tenants and laborers and the adequacy of food supply mechanisms on the estates. This section examines the available evidence in these areas, drawing upon our own survey and case study results, official statistics, and prior research.

Tenant Incomes

The results from the present case studies, our previous survey, and several previous studies, indicate that on average, the household incomes of burley tobacco-producing tenants are well above the norm for smallholder farmers in Malawi. In Nankumba's (1988) survey of 330 tenants on seventeen well-established estates in Kasungu District, the average tenant profit from tobacco (after deductions for credited inputs) was K 476 during the 1986/87 season. In a survey by the Center for Social Research which included 90 tobacco tenants on twenty estates, the mean tenant profit was K 396 during the 1987/88 season (Nyanda and Shively (1989)). In our 1990 survey, the average reported tenant profit on 90 estates (for 1622 tenants) for the 1988/89 season was K 621 (Mkandawire, Jaffee, and Bertoli (1990, Table 4.10)). From the present case study research, for the twenty-two tenants who were also tenants last season (eg. 1989/90) and thus can report an income, the average profit from tenancy was K 692.

Each of the above figures includes only tenant profits from burley tobacco. They do not include income from other sources, such as estate or off-estate casual labor work, food crop or livestock sales, etc. In the survey by the Center for Social Research, these other sources of income were found to be quite significant, contributing an additional K 237 per tenant household (for an average total income for tenants of K 633). However, major conceptual and data recording problems were associated with the Center's findings on such other sources of tenant income. In the present case study research, cash income other than from burley tobacco production was found to be very insignificant for most tenant households. For the twenty-two tenants reporting tenancy incomes from 1989/90, the average non-tobacco income was only K 23.48, with the highest 'other income' reported by any tenant being K 210. The average total tenant cash income for our sample was thus K 715.48.

It is also important to include within the income of tenants the value of the consumption credit (eg. food rations) during the course of the production season. In each of the estates sampled during the 1990 survey which do employ tenants, food rations were reported as being provided, the usual ration being one bag of maize per household per month over a period of five to eight months. While different estates charge their tenants different sums for such food supplies, the value or income equivalent of

such rations can be considered in terms of the cost which tenants would have had to incur to acquire such supplies. If we assume that the tenants are able to purchase maize from ADMARC at the official subsidized price (K 25/bag and K 30/bag in 1989 and 1990 respectively) and that no transport or other transaction costs are incurred, then the values of the food rations would have been K 125 - 200 (1989) and K 150 - 240 (1990), depending on the number of months the rations were provided. Even taking the lowest figure for 1990, this would still bring the average total income for our sampled tenants to K 865.48.

By comparison, average household incomes in the smallholder customary sub-sector are considerably lower. According to the World Bank (1990, Table III.A.2.), the average household income for the so-called "core poor" (eg. those living in households with less than 0.5 of a hectare) was only K 156 in 1989, while that for the so-called "other poor" (eg. those with landholdings of between 0.5 and 1.5 hectares) was K 305 in 1989. Given our findings regarding the landholdings of tenants, it is the incomes of these latter "other poor" which are the more appropriate point of comparison. Considering only tenant profits from tobacco and disregarding other income sources and the value of food rations, the average reported earnings for tenants in both our 1990 survey and the present case study research are more than double this estimated average income for the half a million rural households classified as Malawi's 'other poor'.

Thus, on first examination, tenancy on estates appears to have served as a means by which many smallholder households have escaped abject poverty. According to the World Bank (1990), the 'poverty line' in rural Malawi, that is the income level at which the household can meet minimum nutritional requirements while still maintaining the households' preferences for food and non-food items, lies at K 410 amongst smallholders and K 609 for tenants, the differences being due to differences in average household sizes and consumption patterns. Average tenant cash incomes and food ration supplements appear to exceed these 'poverty lines'.

Tenancy on tobacco estates also appears to provide smallholder households with larger incomes than those obtained through contracted tea and sugar production in Malawi. According to Nankumba and Kalua (1989), some 60% of smallholder tea growers in Malawi earned less than K 300/year over the 1985-87 period, while 61% of smallholder sugar growers earned less than K 500/year over this same period.

What has happened to average tenant earnings over time and how have such income trends compared with the incomes of agricultural wage laborers and smallholder farmers operating within the customary sub-sector? Time series data on tenant incomes are not readily available. In the apparent absence of such data, Duncan (1990) used as a proxy the weighted average of the TAMA guideline maximum prices for each year during the 1980's. Duncan weighted

the prices of different grades according to the relative importance of different grades sold in the auction in 1988/89. However, the relative weights of different grades changes each year due to weather and other factors. Also, tobacco is frequently not graded in the same manner at the point of tenant sale to the leaseholder and buying prices vary significantly between estates. Examination of the records on several estates indicates that in the last few years, the year-to-year changes (and actual levels) in average buying prices have frequently not moved in parallel with official maximum prices.

Two alternative methods to trace changes in tenant incomes are employed here. The first method is a case study method, drawing upon time series data on tenant incomes from one large, well-established estate located in Lilongwe District, which has had between 55 and 85 tenants per year. The table below indicates the average cash payments to tenants, an imputed value for food rations, the sum of such incomes in current terms, and such incomes in real (deflated) terms.

Table 14: Changes in Tenant Incomes on Estate B (Lilongwe)

Season	Number of Tenants	Average Cash Payment (K)	Value of Food Rations*	Total Income** (Current)	Total Income** (Real)***
1982/83	55	390.26	81.32	471.58	471.58
1983/84	55	218.84	102.38	321.22	274.55
1984/85	55	437.48	109.13	546.61	430.40
1985/86		Data	Not Available		
1986/87		Data	Not Available		
1987/88	78	884.21	157.19	1041.40	428.56
1988/89	78	703.63	172.80	876.43	359.71
1989/90	84	732.69	183.60	916.29	295.58

* Based on average of six bags of maize at the Lilongwe 'open' market rate as reported in Sahn et. al. (1990, table 27).

**Includes tobacco income and value of food rations, but not other sources as data are not available.

***Current incomes deflated by the Lilongwe low income price index with 1983 = 100. (Calculated from World Bank (1990, Table 4.03)).

(Source: Case Study Estate Tenant Records)

This case study indicates that despite the near doubling of average tenant incomes between the early and late 1980's, the real value of such incomes have been stagnant or even declined during this period.

A second method for examining the trends in tenant nominal and real incomes over time is to utilize aggregated data from the Tobacco Control Commission on the number of tenants nation-wide

and the total value of national burley tobacco sales at auction. Case study analyses indicate that in recent years, the actual payments to tenants constitute, on average, approximately 15% of the gross earnings on the auction floors. We will assume that this ratio has held throughout the 1980's, with estate owners adjusting their tobacco buying prices and input and food ration deductions in response to changing prices on the auction floors. The results of this analysis are presented in the table below:

Table 15: Changes in Estimated Average Tenant Incomes Nation-wide

Season	Average Tenant Profits*	Value of Food Rations**	Total Income*** (Current)	Total Income (Real)****
1979/80	156.14	40.12	196.26	196.26
1980/81	326.86	50.71	377.57	351.55
1981/82	365.14	74.79	439.93	368.76
1982/83	173.92	81.32	255.24	181.54
1983/84	318.03	102.22	420.25	255.93
1984/85	304.41	109.13	413.54	231.29
1985/86	372.43	107.08	479.51	231.20
1986/87	518.82	130.30	649.12	253.07
1987/88	544.03	157.19	701.22	205.22
1988/89	503.77	172.80	676.57	173.04

*Estimated by multiplying the gross value of burley tobacco auction sales by 0.15 and then dividing by the number of tenants as reported by the TCC.

**Based on an average of six bags of maize per tenant, priced at the Lilongwe 'open' market price as reported by Sahn et al. (1990, table 27).

***Includes tobacco profits and food ration values only.

****Deflated by the Lilongwe low income consumer price index, with 1980=100.

(Source: Derived from TCC and other Data)

The table suggests that with the exception of the 1982/83 and 1988/89 seasons (eg. both seasons with relatively low auction prices), the real value of average tenant incomes were maintained throughout the 1980's. Still, since the mid-1980's, tenant incomes in real terms appear to have remained stagnant.

While the average real incomes of tenants may have remained stagnant through the 1980's boom years of burley tobacco expansion, long-term trends in the profitability of smallholder agriculture and the earnings of agricultural wage laborers appear to have been considerably worse. Hence, the opportunity costs for being a tenant may have dropped considerably during the 1980's, making tenancy that much more attractive. An indication of this is provided in the table below which includes indices for average real tenant earnings (from data in Table 15 above), for average real earnings by wage laborers on private farms in the

agricultural sector, and for smallholder profitability from maize and groundnut production, as well as ratios between these indices.

Table 16: Indices of Tenant Profits, Agricultural Wages and Smallholder Profitability

Year	Index of	Index of	Index of	(1)	(1)
	Real Tenant Incomes*	Real Agri. Wages**	Smallholder Profitability***	(2)	(3)
	(1)	(2)	(3)		
1980	100	100	100	1.0	1.0
1981	179	114	100	1.57	1.79
1982	188	131	103	1.44	1.83
1983	92	93	97	0.99	0.95
1984	130	81	88	1.60	1.48
1985	118	91	83	1.30	1.42
1986	118	83	71	1.42	1.66
1987	129	72	70	1.79	1.84
1988	105	NA	72	NA	1.46
1989	88	NA	69	NA	1.28

*Derived from Table 15 above.

**Derived from data on agricultural wages in the private sector provided in World Bank (1990, Table 5.01) deflated by the Lilongwe low income consumer price index.

***Based on data provided by Duncan (1990) with gross margins/person-hour calculated for smallholders producing 70% maize and 30% groundnuts and with this weighted average deflated by the Lilongwe low income consumer price index.

The indices and ratios presented in the table suggest that at least during the early-to-mid-1980's, the (average) profitability of tenancy on estates increased significantly relative to the income-generating possibilities from agricultural wage employment or crop production and sales within the smallholder sub-sector.

While the evidence presented thus far suggests that tenants, on average, have experienced higher and more favorable trends in their incomes compared with agricultural wage laborers and farmers within the smallholder customary sub-sector over the past decade, there is also evidence which suggests that the variability of incomes amongst tenants is very high and therefore many tenants may be no better off than customary smallholder producers or wage laborers, at least in terms of cash incomes. Based on Nankumba's (1988) data for tenant yields, prices, and production credits, we estimate that nearly one-fourth of his 330 sample tenants earned cash profits of less than K 100 during the 1986/87 season and that 53% of his sample earned less than K 300.

In contrast, for two of the estates within his sample (with a combined total of 55 tenants), average tenant earnings exceeded K 865.

Large dispersions in tenant incomes on individual estates also appear to be common. This can be seen in the scatterplots presented below, representing the dispersion of tenant incomes on two estates for the 1988/89 season. Scatterplot 1 is for a medium-size (eg. 80 hectares), family-owned and-managed estate with an average tobacco yields in line with the national norm. Scatterplot 2 is for a large, well-established estate with average yields well above the national norm.

For the 'Average Yield Estate', we find that during the 1988/89 season, more than one-fourth of all tenants (eg. 26 of 101) earned no cash income at all, unless of course they sold all or part of their tobacco illegally to another estate. An additional one-fourth of tenants earned cash incomes below K 300: eg. the World Bank's estimate for the average household incomes of Malawi's "other poor". In contrast, the ten best paid tenants had an average cash income of K 1000 and accounted for 36% of the estate's total cash payments to all of its tenants.

Scatterplot 2, representing the 'high yield' estate, also shows a wide dispersion of tenant incomes. However, in this case, the majority of tenants earned cash incomes of between K 400 and K 800, with all tenants earning at least some cash income. Due to the large number of 'middle-income' tenants of this estate, the high income earners do not account for a disproportionate share of total payments to tenants.

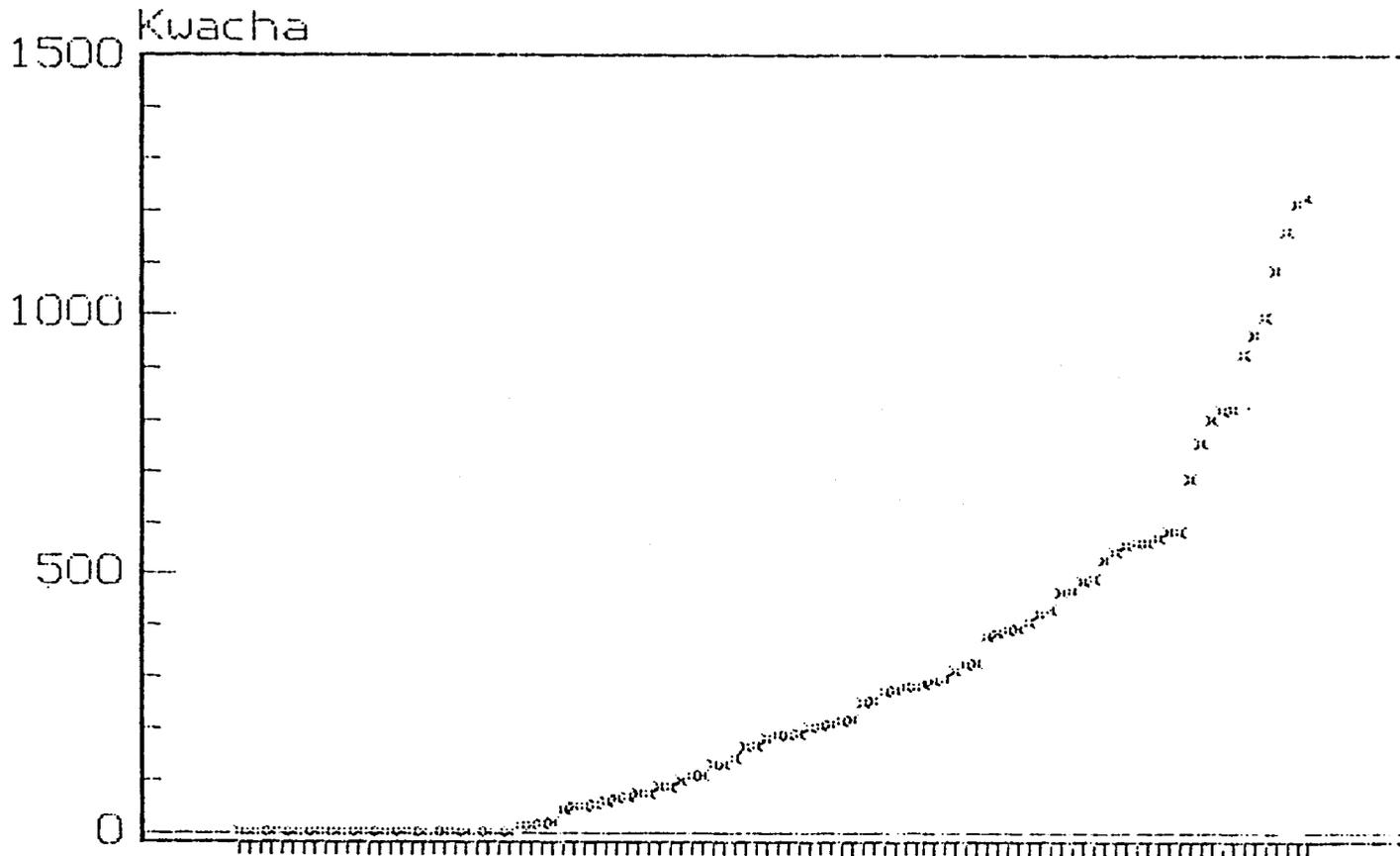
From our case studies from Kasungu District which includes 22 income-reporting tenants on eight estates, the distribution of tobacco profits for the 1989/90 season is shown in the Table below.

Table 17: Reported Profits from Tenancy (1989/90)
(Tenant Sample from Kasungu Estates)

Profit Range	Frequency	Proportion
K 0 to 300	8	36.4%
K 301 to 500	4	18.2
K 501 to 750	2	9.1
K 750 to 1000	4	18.2
K 1001 + Higher	4	18.2
Total	22	100.0
<hr/>		
Mean	K 692.00	
Std. Dev.	648.17	
Minimum	0.00	
Maximum	2309.00	

(Source: Case Study Field Work 1991)

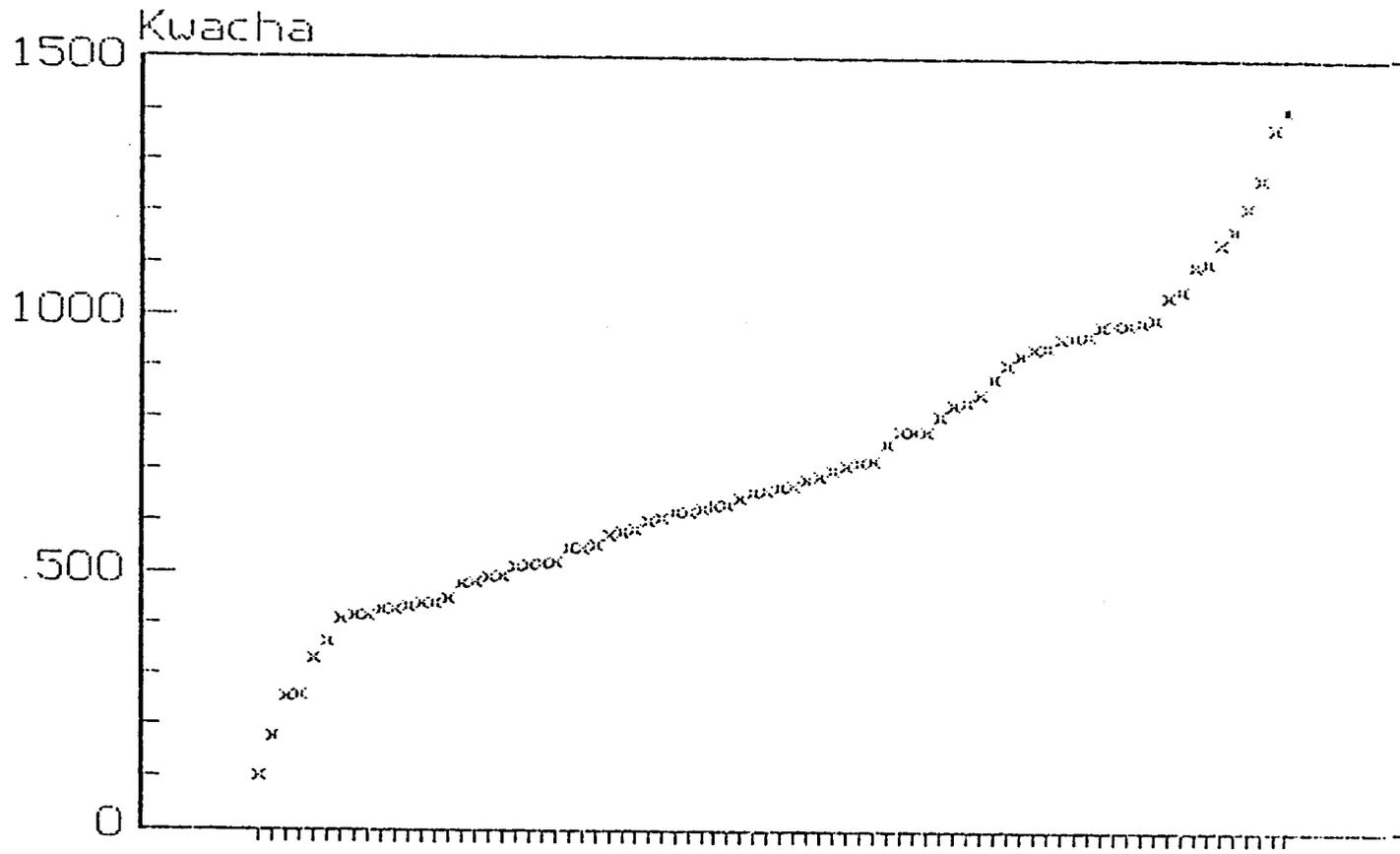
DISPERSION OF TENANT INCOMES
1988 - 1989
AVERAGE YIELD ESTATE
N = 101



x Graph A

26 Tenants earned no income.
4 Tenants earned K1000. +

DISPERSION OF TENANT INCOMES
 1988 - 1989
 HIGH YIELD ESTATE
 N = 78



* Graph A

Lowest payment K95.
 10 Tenants earned K1000. +

While more than one third of our sample earned profits from tobacco of less than K 300, a similar proportion reported profits exceeding K 750. The four highest earners, each with profits exceeding K 1000, accounted for 48% of the total profits for the sample of twenty-two tenants.

These preliminary findings lead us to suggest the following pattern of segmentation among tenant households. Three main segments can be identified:

1) "Accumulating Tenants"

One segment, comprising perhaps one-fifth of all tenant households, appears to be earning relatively high incomes from tenancy with cash and in-kind earnings exceeding K 750 and even K 1000 per season. Such 'accumulating tenants' are likely to be sending remittances home and investing in livestock, off-farm businesses, and even estates of their own.

2) "Poor Tenants"

A second segment, comprising some 25-30% of all tenant households appears to be earning little or no cash income from tenancy. The living standards for this group of 'poor tenants' could well be lower than the norm within the customary smallholder sector. It is among this group of tenants that turnover is especially high.

3) "Middle Tenants"

The third segment, comprising perhaps one-half of all tenant households, has earned moderate levels of cash income from tenancy, in the order of K 300 to K 600. While not accumulating large incomes and savings for investment purposes, such 'middle tenants' do generally have larger disposable incomes than most smallholders operating within the customary sub-sector. However, in light of our findings regarding the poor housing, water, and sanitary conditions on most estates, it is debatable whether such 'middle tenants' actually have higher living standards than the norm in smallholder villages.

Given this wide dispersion of tenant incomes and its implications for the welfare of large numbers of people, it is important to understand what factors influence tenant incomes, both positively and negatively. We would expect tenant incomes to be influenced both by factors specific to particular estates and factors which are tenant- or tenant household-specific. Among estate-specific factors, those expected to influence tenant incomes (and yields) might include: overall size, years of operation, land quality, access to credit, degree of mechanization, degree of specialization in tobacco production, intensity of fertilizer use, and the education and experience of the manager.

Tenant-specific factors expected to influence tenant yields and

incomes might include: the tenant's age, education, and tobacco-growing experience, the size of his household, and the size of his tobacco plot on the estate. Unfortunately, the available data from survey and case study sources are sufficient for us to perform only a very preliminary analysis on (some of) these income-influencing factors. Further research is required in this area.

To examine the relationship between tenant incomes and the characteristics of particular estates, further analysis was undertaken of the data set from our 1990 survey. One factor expected to have a significant and positive effect on tenant earnings is the overall size of the estate, this being a proxy for access to land and perhaps financial resources. However, the correlation coefficient between average tenant payments and total leasehold size was very low (eg. .03). Still, a breakdown of average tenant payments according to estate size category does indicate that such payments are considerably lower, on average, on the smallest estates (eg. less than 15 hectares) and the incidence of relatively high tenant incomes is much more common on the larger estates. For example, while 64% of medium-scale estates (eg. 30-100 hectares) and 70% of large-scale estates (eg. 100.01+ hectares) reported average tenant incomes above K 500 for 1988/89, only 40% of small-scale estates less than 30 hectares reported average tenant incomes of such a magnitude. Among the smallest estate size category, 41% of estates reported average tenant earnings of below K 300. These results are summarized in the Table below.

Table 18: Average Cash Payments to Tenants
(Number and Proportion of Reporting Estates)

Average Payment	Estate Size Category (Hectares)				Total Cases
	0-15	15.01-30	30.01-100	100.01	
K 300 or less	9 (41%)	5 (22%)	3 (16%)	1 (5%)	18 (21%)
K 301 to 500	5 (23%)	8 (35%)	4 (21%)	5 (25%)	22 (26%)
K 501 to 700	4 (18%)	6 (26%)	6 (32%)	6 (30%)	22 (26%)
K 701 + Higher	4 (18%)	4 (17%)	6 (32%)	8 (40%)	22 (26%)
Total	22 (100%)	23 (100%)	19 (100%)	20 (100%)	84 (100%)
Mean Value (K)*	372.9	565.3	617.2	643.2	621.3
Std. Dev.	230.1	291.7	253.1	305.9	281.6
Total # Tenants	79	119	235	1189	1622

*Weighted by the number of tenants per estate.

(Source: Field Survey 1990)

Several other estate-specific factors were correlated with average reported tenant earnings. The results of this analysis are as follows:

Average Tenant Cash Payments correlated with:
(84 Reporting Estates; 1990 Survey)

<u>Factor</u>	<u>Coefficient</u>
Year Estate Leased	-.08
Manager's Education	+.37 *
Manager's Age	-.28
Manager's Years on Estate	+.02
Estate Credit from Banks	+.12
Average Credit to Tenants	+.26
Tobacco /Total Cropped Area	-.37 *

* 1-tailed significance .01

The analysis provides only limited insight into the estate-specific factors (other than size) affecting tenant incomes. The age of the estate (eg. year leased) was not an important factor influencing tenant incomes within our sample. The analysis does suggest that the education of the manager has a significant (positive) influence on the incomes accrued by tenants, presumably since better educated managers are more effective in communicating technical information to tenants and/or motivating them to work hard. A small negative relationship between tenant incomes and the manager's age was found, although this may simply be a negative proxy for the manager's education (eg. older managers have less education). Practically no relationship is found between tenant incomes and the number of years in which the manager has worked on the current estate.

Small positive associations were found between tenant income and 1) estate credit from banks and 2) estate credit to tenants, the latter perhaps picking up a positive influence of increased fertilizer supplies and application. A negative and statistically significant relationship was found between tenant earnings and the proportion of the estate's total cropped land which is planted under tobacco. This suggests that estates which are heavily specialized in tobacco and do not include other crops into their rotations, may be undermining the income-earning potential of their tenants.

This latter hypothesis was tested further by examining the crop rotations practiced on the sampled estates and linking such crop rotations with a) the average marketed yields recorded for burley tobacco for 1989/90 and b) the average reported cash payments made to tenants. The results, summarized in Tables 19 and 20 below indicate that estate (and therefore tenant) yields are considerably higher on estates practicing crop rotations and that tenants operating on estates which do practice some form of crop rotation appear to earn higher incomes, on average, than tenants participating in mono-cropping regimes.

Table 19: Estate Burley Yields According to Crop Rotation Form
(Mean Yields for Marketed Tobacco*)

<u>Crop Rotation</u>	<u>Number of Estates</u>	<u>Mean Yield</u>
Monocropping**	9	864.35
Two-Year Rotation***	30	935.37
Three-Year Rotation****	10	894.89
Four-Year Rotation*****	5	1038.52
Total Cases/Sample Mean	54	933.86

* Marketed yields calculated as the quantity of burley tobacco sold over the auction floors divided by the planted area for burley for the 1989/90 season.

**Continuous cropping, year after year, of one crop for three years or more.

***Alternating crops of different kinds (eg. tobacco-maize-tobacco-maize)

****Three years planting different crops plus one year fallow (eg. tobacco-maize-tobacco-fallow)

*****Two years cropping followed by two years fallow (eg. tobacco-maize-fallow-fallow)

(Sources: Field Survey 1990; Auction Holdings Sales Data)

Table 20: Cash Payments to Tenants According to Crop Rotation Form
(Mean Cash Payments in Kwacha to Tenants, 1988/89 Season)

<u>Crop Rotation*</u>	<u>Number of Estates</u>	<u>Mean Payment</u>
Monocropping	7	519.29
Two-Year Rotation	25	563.70
Three-Year Rotation	8	540.03
Four-Year Rotation	3	611.67

*Definitions as in Table 19.

(Source: Field Survey Data 1990)

To examine tenant-specific factors influencing tenant incomes, analysis was made of the data from our tenant and estate case studies in Kasungu and Lilongwe Districts. For the Kasungu case studies of twenty-two tenants (who reported incomes from tenancy during the 1989/90), the analysis provided the following results:

Tenant Incomes for 1989/90 correlated with:
(Twenty-two Sampled Tenants)

Factor	Correlation Coefficient
Tenant's Years of Education	+ .12
Tenant's Landholdings at Home	+ .40
# of Years as a Tenant	+ .15
Total Household Size	+ .20
Number of Adults in Household	+ .62 **
Number of Children in Household	- .17
Amount of Credit Received (89/90)	+ .72 **

** 1-tailed significance .001

(Source: Field Survey 1991)

The analysis shows somewhat surprisingly only a small (and statistically insignificant) positive relationship between tenant earnings and the educational background. A similar result was obtained by Nankumba (1988) and by Nyanda and Shively (1989). Also relatively small is the association between the tenant's experience (eg. # of years as a tenant) and his income. The very small size of our sample may have prevented such a relationship from emerging. In an analysis of the dispersion of tenant incomes on one large estate in Lilongwe District, we did find a strong relationship between tenant experience and income as indicated below:

Table 21: Dispersion of Tenant Incomes According to Experience
(Case Study Large Estate (Lilongwe); 1989/90 Season)

Number of Years as Tenant	Number of Cases	Mean Cash Payment
1	13	K 571.98
2-3	16	678.64
4-6	21	820.55
7-9	9	955.65
10+	7	1005.16
Total Cases/Sample Mean	66	775.19

(Source: Case Study Field Work 1991)

Within our sample of tenants at Kasungu, a positive association was identified between tenant income and the amount of land which the tenant owns off the estate. This suggests that high income-earning tenants may be using part of their incomes to acquire additional land. While total household size and tenant incomes exhibit a small positive relationship, there is a much stronger relationship between the number of adults in the household and tenant incomes. Nyanda and Shively (1989, Table 15) also found

this to be a significant factor. In contrast, our case studies indicate a very small negative relationship between tenant incomes and the number of children in the household. A very strong and statistically significant positive relationship was found between tenant incomes and the size of their production/consumption credit, this probably reflecting the positive influence of increased fertilizer use.

Other Sources of Tenant Household Income

Of the twenty-two tenants sampled who reported incomes from tenancy during the 1989/90 season, fourteen reported undertaking income-generating activities in addition to burley tobacco production. While the most common practice is to have household members do ganyu work on or off the estate, the most lucrative 'other' income sources were construction work, selling crops and processed foods, selling chickens and eggs, and selling beer. For only two tenants did such additional incomes exceed K 100, while for most, the incremental earnings did not exceed K 25. For these twenty-two tenants, the mean reported additional income was only K 23.48, although this does not include the in-kind payments associated with ganyu work and likely reflects an under-reporting of incomes from kachasu (local beer) distillation.

Tenant Uses of Income

Incomes from tenancy are used for a variety of purposes, the most commonly reported being the purchasing of clothes/footwear, the purchasing of household utensils, and investment in livestock. A few tenants also report using their income to lease land, pay medical bills, or buy durable items, such as bicycles and radios. Some 55% of the sampled tenants who reported making incomes from tenancy last year (eg. 12 of 22 cases) indicated that they sent part of their incomes to relatives in the form of remittances. The magnitude of such remittances was not reported. According to Nyanda and Shively (1989), the flow of money between tenants and other family members in the form of remittances may be quite substantial. Both in our sample and in that of Nyanda and Shively it is primarily the higher income-earning tenant households which have made such remittances.

Remuneration of Permanent Laborers

As indicated earlier (eg. Table 16), there has been a downward movement in the real wages of laborers on private agricultural enterprises over the past decade. This is a reflection of a policy of restraint on the level of minimum agricultural wages and, at least in recent years, of the effect of the entry of large numbers of refugees from Mozambique into the rural labor market. In our small sample, some 14% of interviewed permanent laborers (eg. 4 of 29) were found to be refugees from Mozambique

and this in an area quite distant from any Malawi-Mozambique border. We observe that on some estates in Lilongwe District, the proportion of permanent laborers who originate from Mozambique is substantial.

While the minimum agricultural wage was increased substantially from K 0.77/day to K 1.74/day in 1989, it does not appear that this new wage rate has been widely applied. In fact, the results from our 1990 survey indicated that only among estates of the largest size category (eg. above 100 hectares) was the higher minimum wage being generally applied for adult male permanent laborers. Even taking into account and imputed value for food rations (eg. K 10-15/month), some 75% of the adult male permanent laborers employed on estates less than 30 hectares were earning below the minimum wage of K45.24 per month during the 1989/90 season, with most of these laborers earning cash incomes of less than K 25 per month. Table 22 below reproduces the results of our 1990 survey.

Table 22: Payments to Adult Male Permanent Laborers
(Numbers and Percentages of Laborers Obtaining Specified Wages)

Monthly Payment	Estate Size Category (Hectares)				Total
	0-15	15.01-30	30.01-100	100.01+	
Less than K 15	7 (6%)	13 (10%)	27 (12%)	0	47 (5%)
K 15 to 30	82 (66%)	81 (64%)	84 (39%)	24 (5%)	271 (27%)
K 30.01 to 44.99	8 (6%)	5 (4%)	3 (1%)	156 (30%)	172 (17%)
K 45 to 48*	24 (19%)	19 (15%)	73 (34%)	325 (62%)	441 (45%)
More than K 48	3 (2%)	9 (7%)	30 (14%)	16 (3%)	58 (6%)
Total Workers	124	127	217	521	989

*Because the minimum wage depends upon the number of days worked in a month, for some estates it varies between K 45 and K 48 for full-time workers. Payments over K 48/month may be considered above the minimum wage.

(Source: Mkandawire, Jaffee, and Bertoli (1990, Table 4.13))

Results from the present case study research are broadly consistent with the earlier findings. Among twenty-eight permanent laborers reporting wage incomes for this season (1990/91), the mean wage rate is K 29.71 per month. Adding to this a monthly food ration value of K 10-15, the average wage still remains below the legislated minimum wage. Examining the dispersion of wages within our sample, we find that nearly one-third of the permanent laborers are paid cash wages of between K 17.50 to K 24 per month, another one-third are paid wages of between K 25 and 33.33 per month, with the final one-third paid

wages of K 34 per month and above. Only five of the twenty-eight workers reported earning a cash wage equal to or above the official minimum wage.

An attempt was made to identify the characteristics of permanent laborers which render them more likely to receive higher wages on estates. The results of this analysis are as follows:

Permanent laborer monthly wages correlated with:
(Twenty-Eight Cases)

<u>Factor</u>	<u>Correlation Coefficient</u>
Age of Laborer	+ .18
Years of Education	+ .48 *
Landholdings off the Estate	+ .40
When Laborer Came to Area	- .12

* Significance .01 1-tailed test.

The analysis suggest only a small positive relationship between the laborers age and experience (the latter being the inverse of the variable of when the laborer came to the area) and his monthly wage. A large and statistically significant relationship appears to exist between the laborers educational background and his earnings. Those laborers who indicated that they can read receive an average monthly wage of K 33.01 compared with only K 25.90 for those who cannot read. A positive relationship appears to exist between the laborers wages and the size of his landholdings. This may suggest that individuals with larger landholdings have a higher 'reservation wage': the wage payment needed to induce them to leave their home farm. Relatively small differences were found in the average wages of married vs. single laborers (eg. K 31.5 vs. K 28.3) and those with and without prior experience as estate laborers (eg. K 31.7 vs. K 29.1).

Twenty-one of the twenty-nine permanent laborers report income sources this year in addition to their work on the estate. The most common source is ganyu work off the estate, although this is generally for food or for small sums of money. For a few laborers, far more substantial earnings have been earned through the sale of crops, the sale of processed foods, and the sale of chickens and eggs. Three permanent laborers report incomes of between K 120 and 470 from the sale of crops, while one of the permanent laborers, a brick-maker by profession, reported an income of K 2000 for the previous year.

As reported in Beyond 'Dualism', wages paid to children (eg. people less than 15 years of age) serving as permanent laborers are normally considerably below those indicated above for adult males. Only 15% of such child permanent laborers (eg. 51 of 333) were reported to be earning wages above K 30/month. One-fourth of such child workers (eg. 85 workers) were paid less than K 10 and another one-fourth (eg. 88 workers) were paid between K 10 and 20. Even taking into account food rations, only a tiny proportion

of such workers received the minimum wage in cash and in-kind.

Food Security amongst Estate Workers

Tenants and permanent estate laborers tend to draw upon multiple sources of food in order to meet their and their families' nutritional requirements (Table 23). Two of these sources-- 1) food rations provided by the estate owner/manager and 2) own food production on or nearby to the estate--should be regarded as the 'core' sources of food for these workers. Supplementing these food sources, both in quantity and variety are several potential alternative sources, including ganyu work on other estates, maize purchases from ADMARC and other market sources, food supplies from relatives, food purchases from nearby smallholders, and hunting for animals and insects. Each of these food sources is discussed in turn.

Table 23: Major Sources of Food for Estate Workers*
(Numbers and Proportion of Workers)

Source	Tenant		Permanent Laborer	
	Freq.	Prop.	Freq.	Prop.
Rations	30	94%	20	69%
Produce Own	19	59	8	28
Ganyu Work	5	16	2	7
Buy from ADMARC	5	16	2	7
Buy from Market	5	16	2	7
Relatives (Gift)	2	6	0	0
Charity	0	0	1	3

*Multiple responses lead proportions to add up to more than 100%.

(Source: Case Study Field Work 1991)

Food Rations

The vast majority of estates provide food rations, both to tenants and permanent laborers, the costs of which are either deducted from crop payments (eg. for tenants) or are implicit in the wage rate paid (eg. for permanent laborers). In our 1990 survey, all estates which have tenants reported providing them with food rations, while all but a limited few small-to-medium scale estates also reported providing rations to their permanent laborers. In most cases, food rations consist only of maize or flour, with supplies of beans, groundnuts, and other foods being relatively rare. The absence of diversified food provisions may contribute to nutritional deficiencies amongst estate workers and their dependants. In the case of permanent laborers, rations are sometimes provided in the form of cooked food. Our case study

findings suggest that the size of rations does not differ among households of different sizes. That is, tenant households with seven members are provided with the same 90 kg. bag of maize per month as households with three members.

The length of time in which rations are provided varies by estate. For tenants, rations are provided for between four and nine months. In our 1990 survey, the average number of months for tenant rations was 7.7 months. Rations typically begin in August or September and continue through February or March. For permanent workers, the period of rations normally depends upon the periodicity of work.

Worker Own Food Production on the Estate

As indicated earlier, different estates have different policies with respect to the allocation of land to tenants for own food production. Where some land is allocated for this purpose, it appears (from our case study research) that tenants attempt to produce a diverse mix of crops in order to diversify their diets and stagger the time periods in which different food crops mature. While local and hybrid maize occupy the largest tenant food crop area, many tenants also plant sweet potatoes, beans, peas, and pumpkins, either as intercrops with maize or in several ridges in and around the tenant's plots and home area. Although the practice is discouraged, some tenants intercrop pumpkins with their tobacco. These crops reach maturity in February and March, helping to stave off hunger within tenant households during the period prior to the maturation of the maize crop.

While tenants are sometimes provided maize seed on credit, they are usually not provided fertilizer for their maize crop. The main exceptions to this are when the tenants are required to sell all or most of their maize crop to the estate for its subsequent distribution as food rations. While on those estates practicing crop rotation, the tenants' maize crop benefits from the residual effect of fertilizer applied to the previous tobacco crop, where crop rotation is not practiced, tenant maize yields are likely to be very low. With maize plantings of 0.40 Ha., a likely output will be some 320 kilograms, sufficient to meet average tenant household requirements for less than months. Thus, even when land is allocated to tenants for own food production, tenant households still remain heavily dependant upon food rations and other sources of food.

Own Production on Land Nearby to Estate

Four of the tenants and four of the permanent laborers sampled reported having small plots of land nearby to the estate where they are employed. On these plots, these workers or their family members cultivate maize. Such small plots were acquired through marriage, from relatives, or by lease.

Ganyu On Other Estates

Five of the sampled tenants and six of the permanent laborers indicated that they or their family members have gone out for ganyu in order to supplement their food supplies. In the case of tenants, it appears quite common to send children to do ganyu on neighboring estates in order to bring back additional food supplies.

Other Sources of Food

There are several other sources of food for estate workers. Several workers report buying maize from ADMARC and other distributors, using savings from income. Tenants report that it is quite common for them to purchase small quantities of beans and groundnuts from smallholders surrounding their estates which helps to broaden their diets. Both tenants and permanent laborers engage in what may be called 'protein hunting', collecting mice, termites, army worms, and caterpillars for drying and cooking and subsequent consumption.

Food Insecurity

Despite the varied sources of food, food supplies for estate workers are frequently inadequate to meet household needs. The inadequacy and/or high cost of food supplies was the leading complaint registered by both tenants and permanent laborers, 66% of the former and 45% of the latter claiming that food insecurity is a major problem. Some 56% of tenants (eg. 18 of 32 cases) and 38% of permanent laborers (eg. 11 of 29 cases) report that over the past year, they have run out of maize to feed themselves and/or their families. About one-fourth of our entire sample (eg. 16 of 61 cases) has been so desperate as to consume maize bran during the past year, this normally being used as animal feed.

Food insecurity appears to be most severe in the month of February and more generally over the January to March period. It is at this time when the estate food ration system frequently fails as estate owners have limited cash, as the availability of overall supplies in the market is low, and as estate owners/managers must reserve some food stocks to pay ganyu workers engaged in tobacco reaping and tying. Ganyu workers are generally paid with food, either maize or maize flour. This use of available food supplies tends to undercut the food rations to permanent workers, especially tenants. By this time of the season, the tobacco crop is well developed, rendering the tenants 'captive' to the crop and unable to leave the estate in search of food or other work. Our impression is that the food ration system fails most commonly on the smaller estates as such estates are the most cash constrained by this time and as many such estates lack the transport facilities to bring food supplies from distant sources when the local ADMARC distribution depot has little or no stocks.

The greater incidence of food insecurity amongst tenants stems primarily from their larger household sizes on the estates, given that relatively few permanent laborers are accompanied by their families on the estates. There is also some indication that permanent laborers are given priority over tenants during the critical food shortage months as they normally are working directly with the owner or manager and as they are much more mobile than tenants at this stage in the season.

Comparing those tenant households which reported running out of maize this year with those who did not, we found some expected and some unexpected patterns. As expected, those tenants running out of maize have larger households, on average, than those who did not. The respective averages were 5.94 and 5.43 persons per household. Unexpectedly, it does not appear that being a relative of the owner cushions tenants from food shortages. An equal proportion of relative/tenants and non-relative/tenants reported running out of maize. Also unexpected was the fact that those reporting running out of maize have, on average, larger landholdings at home than those who didn't run out of maize (eg. 2.36 vs. 1.96 Ha. respectively). This suggests that one's landholdings at home are of little consequence in influencing food security after migration to an estate. Another unexpected result was that among our sampled tenants, it made little difference how many years they were working on the present estate in terms of having access to sufficient food. Long-term tenants were just as vulnerable to food shortages as new tenants.

It is not entirely clear whether the problematic food security situation observed in our case study research can be attributed largely to the lower than average maize harvest last year or is a more continuous and widespread feature of the estate sub-sector. This is a subject which requires further research as well as monitoring on a continuous basis. Whether or not the food security situation amongst workers on estates is any better or worse than in source or nearby smallholder locations also requires further research.

An indication of the possible severity of the problem is provided by data collected at the Kasungu District Hospital Under 5 Clinic. Over the April 2 to April 11 period, 1612 children attended the clinic, 19% of which were children from estates. Each of the children was assessed for whether their weight was normal for their age. The results of this short period analysis are that the incidence of stunting (eg. low weight for age) is substantially higher for children coming from estates than from other rural or urban areas. While 50% of the children from non-estate sources had a low weight for age (according to the norm indicated on the Child Health Card), 57% of children from large estates and 71% of children from small estates had a low weight for age. These findings are summarized in the following table:

Table 24: Weight for Age of Children Attending Under 5 Clinic
At Kasungu District Hospital (April 2-11, 1991)

Origin	Low Weight/Age	Normal Weight/Age
Small Estates	74 (71%)	30 (29%)
Large Estates	118 (57%)	88 (43%)
Other (eg. Non-estate)	647 (50%)	655 (50%)
Total	839 (52%)	773 (48%)

(Source: Kasungu District Hospital)

Similar types of analysis on an on-going basis in several districts would provide insight into the relative nutritional status of the estate vs. other rural vs. urban populations.

Conclusions

This exploratory study has examined issues related to the composition, size, and distribution of the estate labor force, the socioeconomic characteristics of tenants and laborers, the nature of tenancy relations and employment terms, and the remuneration, social amenities, and food security provided for these estate workers.

The study has shown that employment of tenants and permanent laborers within the estate sub-sector has expanded rapidly over the past decade, in line with the overall expansion of this sub-sector. If the estate sub-sector has been the engine of economic growth in Malawi, then it has been smallholders who have provided the fuel for this engine through their efforts as tenants and laborers on the estates. As a result of employment growth within the estate sub-sector and the migration of whole families to estates, an estimated one million people, or one-eighth of Malawi's total population, are now resident on estates. In some districts, the resident estate population exceeds one-fourth of the total population.

This large resident population of estate workers and their dependents has major implications for the use of social services, for monitoring the national and district-level patterns of health and food security, and for the welfare of women and children. Up to now, the estate sub-sector, comprising as it does private agricultural enterprises, has been regarded as beyond the reach or mandate of official social, health, and community service organizations. However, given the (growing) size of the worker/dependant resident population on estates, it is imperative that such 'invisible' people be brought into the mainstream of public service delivery systems.

The study has shown that, on average, tenant farmers earn incomes well above the norm within the customary smallholder sub-sector. Taking into account the value of food rations supplied, average tenant incomes may be in the order of K 800 per season, a figure approximately double the norm in the customary smallholder sub-sector. Nevertheless, there appears to be wide dispersions in tenant incomes both on individual estates and among different estates. In examining patterns of segmentation within the tenant community we have discerned three main groups.

Approximately one-fifth of tenants (eg. about 20,000 in 1989/90) appear to be earning considerable incomes from tenancy relative to the income potential within the smallholder sub-sector. Such tenants earn K 1000 or more after factoring in food rations and other non-tobacco sources of income. These 'accumulating tenants' appear to be investing in homes, in livestock, in off-farm businesses, and, in some cases, in leasehold estates. Indeed, from our 1990 sample we found that a considerable proportion of our so-called "graduated smallholders" were former

tenants. If substantially larger numbers and proportions of tenants could be remunerated at levels obtained by these 'accumulating tenants', then the tenancy system could indeed have a considerable positive impact on rural development in Malawi.

The second and largest group of tenants, comprising perhaps one-half of all tenant households (eg. 50,000 households) earn annual incomes which are somewhat higher on average (eg. K 300-600) than the norm within the customary smallholder sub-sector, yet inadequate for investment purposes. Whether or not the living standards of such "middle tenants" is better than comparable smallholders depends upon the housing and social amenities available on their estate as well as the land and other assets which people have in their home villages.

The third group, comprising some 25-30% of tenants appear to be earning little or no cash income from their tobacco crop, with tenancy providing only a means of subsistence. Lacking the social and community system typically found within the customary sub-sector, such "poor tenants" appear to have a standard of living which is below that found within the customary smallholder sub-sector. Our impression is that many of the tenants working on very small estates (eg. less than 15 hectares) fall within this category. Turnover amongst this group of tenants appears to be very high.

The analysis of estate worker welfare must go beyond assessments of income levels to include aspects of social welfare and food security. In general, we have found that the housing, water, and sanitary conditions on most estates to be poor, although there are some rays of light on some of the larger, well-established estates. Food security and the overall nutritional levels of estate workers and their dependents appears to be a critical problem throughout the leasehold sub-sector, although further research is required on this issue.

If the estate sub-sector is to continue to serve as a major engine of growth for the Malawian economy, then further development of this sub-sector should be guided by the principle of 'development with a human face' rather than a more narrow orientation focusing predominantly on expanding crop production and sales.

Recommendations

1) Nation-wide Estate Sample Survey

Undertake a large nation-wide sample survey of leasehold and freehold estates which includes modules dealing with land area and land capability, cropping patterns, the number and composition of workers, the total resident population, and conditions for housing, sanitation, and social services. The survey instrument should be designed with the input of the Ministries of Agriculture, Health, Labor, Community Services, and Economic Planning and Development as well as the Department of Lands and Valuation, with assistance in survey design and implementation and in data analysis provided by the University of Malawi. The survey can be undertaken using the existing staff from the Annual Sample Surveys and based on in the same enumeration districts as the smallholder survey.

2) Monitoring and Evaluation System For the Estate Sub-sector

Develop a system to monitor changes in the functioning of the estate sub-sector in the areas of land use, natural resource management, crop production, labor, and social welfare. The monitoring system should be coordinated by the Ministry of Agriculture in collaboration with the proposed Bunda Center for Agricultural Policy Research. Drawing upon the Annual Sample Survey staff, sample surveys of estates should be conducted bi-annually, perhaps once in September/October and once in March/April. The monitoring system will track changes in land use, crop production, food security, health, etc., indicating potential problem areas. Bi-annual reports on the performance of the estate sub-sector and the welfare of its population should be generated. A working group to discuss the results of this monitoring effort should be established, perhaps along similar lines as the ASAP working group.

3) The Specification of Major Terms of Tenancy Relations

In order to reduce uncertainties, minimize misconceptions, and deter opportunistic behavior, several basic terms of the tenancy agreements between estate owners and tenants should be explicitly announced and written. At a minimum, these written contracts should specify: 1) the types and unit costs of inputs and production support services to be provided by the owner, 2) the quantity, form, and unit costs of food rations to be provided by the owner, 3) the method and timing of payment for the tobacco sold by the tenant to the owner, and 4) the grading system to be used for tobacco and the owner's buying prices for each grade. These terms of tenancy should be submitted by the estate owner to the Tobacco Control Commission in September, together with information on the number of tenants employed during the current season.

4) Supervision and Monitoring of Estate Management -Tenant Relations

Most tenants have a wide range of concerns with respect to the current tenancy arrangements. Their concerns extend beyond tobacco pricing and social amenities to include the perception that in many cases they are cheated at the end of the season of their legitimate earnings. As of now, tenants have recourse to no institutional body which can arbitrate on their behalf. In theory, TAMA is supposed to protect the interests of tenants, yet TAMA is also a representative of the tobacco growers (eg. estate owners). The centralization of TAMA's activities in Lilongwe also inhibits tenant access to the organization. The Ministry of Labor is also not an established institutional channel for tenant grievances. The Ministry has no legal mandate to handle tenant affairs as tenants are not technically salaried or wage employees.

Rather than create a new institution to supervise and monitor tenant affairs, we feel that the Tobacco Control Commission should be decentralized and should establish within its new structure a "Tenant Management Unit" whose functions will be to develop and disseminate guidelines for tobacco pricing and costings for production inputs and food rations, to carry out spot checks of tenants' working and living conditions, and to respond to grievances rendered by tenants and managers/owners and to resolve disputes between them.

5) Targeted Social Service Outreach Programs on Estates

As private enterprises, estates have not been viewed as falling within the mandate of national health, social, and community services. However, given the large estate worker population in many districts and given the apparent vulnerability of this population to health and nutritional deficiencies, social and community service outreach programs should be developed. Special targeting should be made toward women and children as these appear to be the most vulnerable groups living on estates in terms of illness and undernourishment. With women and children playing an important role in the estate labor force, the provision of improved social services such as basic medical aid, health and nutritional education, and literacy courses, is critical for maintaining let alone increasing worker productivity on estates. Some of the well-established estates are already providing a lead in this direction, yet there is room for improvement. The Estate Extension Trust should consider establishing a nutrition/social welfare unit within its operating structure. This unit should work closely with the Maternal Child Health (MCH) service, whose activities should be extended to include work on estates.

6) Training of Tenants Through Groups

Tenants should not be seen as isolated individuals. They come to the estate as a household unit and there are active informal networking arrangements among tenant households regarding tobacco production practices. In some estates, tenants work jointly for some farm operations, especially fertilizer application. This informal network among the tenants can provide a useful basis for the training of tenants in various farming operations and non-farming spheres. The newly established Estate Extension Trust should target some of its technical advice to tenants, organized into clubs. Tenants voice particular interest in having training programs in tobacco grading, in addition to many other areas. The Estate Extension Trust's organization and contact with these Tenant Clubs should be done in liason with the MOA's ADD structure. This will likely require additional funds and operating means for the ADD extension services.

Members of tenant clubs could assist their membership in a wide range of farm management-related issues. For example, the vast majority of tenants do not keep records of their production and consumption credit with the leaseholders and many managers do not encourage them to do so. This is a source of uncertainty and conflict in the tenant-leaseholder relationship. Tenant clubs, in which there are likely to be some literate and numerate members, could encourage improved documentation of farm records and improved interpretation of such records. The Ministry of Agriculture's extension service, in conjunction with Bunda College, could support this effort by developing a system of tenant cards with both written and pictorial representations of inputs and services provided on credit.

The tenant clubs can also serve as a channel for disseminating information concerning health, nutrition, and child-spacing with the health and nutrition unit of the Estate Extension Trust contacting tenant wives through the tenant clubs.

7) Training of Estate Managers

Various training programs should be developed to sensitize estate managers to the principles and problems of labor relations and management. Field days, short-term courses, or longer-term training could be organized by the Estate Extension Trust, the Malawi Institute of Management, and Bunda College of Agriculture.

8) Improving Housing, Water, and Sanitation Conditions on Estates

The estate worker housing, water, and sanitation conditions on most estates is poor. Most tenant and laborer housing is temporary and small, few estates have a source of clean drinking water, and poor sanitation makes the estate population more vulnerable to morbidity. Although past experience has shown that

it is difficult to enforce estate covenants (eg. regarding the requirement for clean water sources), efforts should continue to encourage estate owners to invest in housing, water, and sanitation infrastructure. Tax incentives could be provided for those undertaking such investments. Donor agencies may wish to provide technical and financial support in this area.

9) Encouragement of Food Crop Diversification on Estates

Neither tenants nor laborers are satisfied by a diet consisting almost exclusively of maize and maize-based foods. For enhanced food security, improved nutrition, and enhanced soil fertility on estates, estate managers and tenants should be encouraged to plant a more diversified mix of food crops to include cassava, beans, groundnuts, and varied types of vegetables. Such crops have proven to be especially important for tenant families during the 'hunger months' when supplies of maize are very limited. The Estate Extension Trust should provide advice regarding appropriate husbandry practices for such crops.

10) Further Research

With respect to the estate labor market and the welfare of those participating or dependent upon this market, further research is required in several important areas. These include:

- a) the participation, remuneration, and social welfare of women and children within the estate labor system;
- b) the conditions of food security on estates and amongst estate workers in different parts of the country and on different types of estates;
- c) the institution of 'ganyu' work as a critical survival strategy for smallholders and many estate workers, and as an important component of the interface between the estate and smallholder sectors;
- d) the impact of smallholder burley tobacco production on the availability of tenants and permanent laborers for estates;
- e) the inter-relationship between smallholders and estate tenants and laborers in terms of commodity (eg. food), inputs (eg. fertilizer), and labor flows;
- f) the remuneration of tenants on different types and sizes of estates, examining the levels and dispersion of such remuneration, and the factors (estate, tenant, location-specific) influencing tenant incomes;
- g) the patterns of organization, remuneration, and social welfare of workers on small-scale, recently-established estates;

h) a comparison of income and social welfare indicators between tenants and smallholders located in 'source' areas (eg. places from which tenants originate) and located within estate areas;

i) case study analyses of "progressive estates" that provide good-to-excellent social amenities (including nutrition programs, improved housing). Assess the replicability of such programs and possible means of support;

j) patterns of short- and longer-term rural to rural migration associated with estate employment.

This research should be coordinated by the Ministry of Agriculture, together with the proposed Bunda Center for Agricultural Policy Research.

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